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# **AGRICULTURAL POLICY ANALYSIS PROJECT, PHASE II**

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## **EL SAVADOR AGRICULTURAL POLICY ANALYSIS LAND TENURE STUDY**

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## TABLE OF CONTENTS

<b>LIST OF TABLES</b> .....	iv
<b>LIST OF FIGURES</b> .....	vii
<b>LIST OF ACRONYMS AND MEASURES</b> .....	viii
<b>ACKNOWLEDGMENTS</b> .....	ix
<b>EXECUTIVE SUMMARY</b> .....	x
<b>1. A PROFILE OF THE LANDLESS, LAND POOR, AND UNEMPLOYED AGRICULTURAL POPULATIONS IN EL SALVADOR</b> .....	1-1
<b>1.1 How Many Landless, Land Poor, and Unemployed Are There in El Salvador?</b> .....	1-4
1.1.1 Data Base .....	1-7
1.1.2 Defining the Landless .....	1-9
1.1.3 Unemployed Agricultural Workers .....	1-13
1.1.4 The Land-Poor Population .....	1-14
1.1.5 Unpaid Family Labor' .....	1-17
1.1.6 Overall Estimate of Landless, Land poor, and Unemployed ...	1-21
1.1.7 Comparison of Results with Other Studies .....	1-23
1.1.8 Indirect Tenancy .....	1-24
<b>1.2 The Landless, Land Poor, and Unemployed Farmers of El Salvador: A Description</b> .....	1-31
1.2.1 Sex, Residence, and Land Tenure .....	1-31
1.2.2 Geographic Location .....	1-34
1.2.3 Age .....	1-37
1.2.4 Marital Status .....	1-38
1.2.5 Literacy and Education .....	1-38
1.2.6 Income .....	1-42
1.2.7 The Impact of Indirect Tenancy on Income .....	1-51
<b>1.3 Policy Recommendations</b> .....	1-55
<b>2. SMALL FARMERS IN EL SALVADOR, 1993: A COMPARISON OF LANDOWNERS, RENTERS, COOPERATIVE MEMBERS, "FINATEROS," AND "TENEDORES"</b> .....	2-1
2.1 The 1993 Land Tenure Survey .....	2-3
2.2 Sample Design .....	2-4

- 1 -

2.2.1	Domain # 1: "Abandoned" ISTA Cooperatives . . . . .	2-5
2.2.2	Domain # 2: 20 ISTA Cooperatives . . . . .	2-5
2.2.3	Domain # 3: FINATA beneficiaries . . . . .	2-6
2.2.4	Domain # 4: Tenedores of the Peace Accords . . . . .	2-6
2.2.5	Domain # 5: National Cross Section of Farmers . . . . .	2-7
2.2.6	Renting as a Distinct Stratum in the Analysis . . . . .	2-8
2.3	Land Tenure Characteristics of the Sample . . . . .	2-10
2.3.1	Amount of Land Possessed . . . . .	2-10
2.3.2	Security of Tenure . . . . .	2-13
2.3.3	How Land was Obtained . . . . .	2-15
2.3.4	Duration of Possession . . . . .	2-16
2.3.5	Payment for Land . . . . .	2-16
2.4	Intensity of Cultivation . . . . .	2-17
2.5	Attitudes Toward the Environment . . . . .	2-20
2.6	Community Problems, Life Satisfaction and Political Support-Alienation . . . . .	2-21
2.6.1	Community Problems . . . . .	2-21
2.6.2	Life Satisfaction . . . . .	2-21
2.6.3	Political Support-Alienation . . . . .	2-24
2.7	Socioeconomic and Demographic Characteristics of the Farmers . . . . .	2-28
2.8	Agricultural Production and Income . . . . .	2-33
2.9	Conclusions and Policy Recommendations . . . . .	2-43
3.	<b>THE AGRARIAN REFORMS IN EL SALVADOR: A CONTEMPORARY ASSESSMENT</b> . . . . .	3-1
3.1	Introduction . . . . .	3-3
3.2	Arguments Presented . . . . .	3-3
3.3	Background to the Reform . . . . .	3-4
3.4	The Land Reform: Problems of the 1990s . . . . .	3-6
3.5	Data . . . . .	3-7
3.6	Beneficiaries of the Reform . . . . .	3-8
3.7	Positive Features of the Land Reform Sector . . . . .	3-11
3.8	Negative Features of the Land Reform Sector . . . . .	3-11
3.9	Analysis of Cases . . . . .	3-18
3.10	Labor . . . . .	3-26
3.11	Credit . . . . .	3-31
3.12	Policy Suggestions . . . . .	3-39

b

**4. LAND PRICE, LAND MARKETS, AND GOVERNMENT INTERVENTION: POSTWAR ADJUSTMENT AND POLICY REORIENTATION . . . . .4-1**

4.1 The Land Market in El Salvador: Rebounding Prices and Proliferating House Lots . . . . . 4-2

4.2 The Land Bank in a Context of Rising Land Costs . . . . . 4-8

4.3 The Land Rental Market: Here To Stay . . . . . 4-11

4.4 Conclusions and Recommendations . . . . . 4-12

**REFERENCES**

## LIST OF TABLES

Table 1.1	Occupations in the Agricultural Sector: Employed Population, 16 and Older . . . . .	1-13
Table 1.2	Employment and Land Tenure . . . . .	1-20
Table 1.3	Derivation of Landless, Land Poor, and Unemployed in the Agricultural Sector in El Salvador (1991-92) . . . . .	1-21
Table 1.4	Agricultural Work Force and Land Tenure . . . . .	1-25
Table 1.5	Land Tenure and Geographic Region . . . . .	1-35
Table 1.6	Departmental Residence of Agricultural Work Force . . . . .	1-36
Table 1.7	Land Tenure and Marital Status . . . . .	1-39
Table 1.8	Land Tenure and Credit . . . . .	1-53
Table 1.9	Land Tenure and Planting of Permanent Crops . . . . .	1-54
Table 2.1	Sample Design: The Five Domains of Study . . . . .	2-5
Table 2.2	Direct versus Indirect Tenancy: National Cross-section Sample Only . . . . .	2-9
Table 2.3	Land Distribution by Tenure Type . . . . .	2-12
Table 2.4	Land Documentation Held by those Working It: Largest Parcel Only . . . . .	2-14
Table 2.5	Price Paid for Purchase-Rental of Land . . . . .	2-17
Table 2.6	Price Paid Per Mz. for Purchase-Rental of Land . . . . .	2-17
Table 2.7	Uncultivated Land . . . . .	2-18
Table 2.8	Reasons Why Land Left Idle . . . . .	2-20
Table 2.9	Attitudes Toward the Environment . . . . .	2-22
Table 2.10	Major Community Problem Perceived . . . . .	2-23
Table 2.11	Life Satisfaction . . . . .	2-24
Table 2.12	Political Support-Alienation . . . . .	2-25
Table 2.13	Consequences of the War for El Salvador's Farmers . . . . .	2-27
Table 2.14	Gender . . . . .	2-28
Table 2.15	Mean Age of Farmers . . . . .	2-29
Table 2.16	Mean Years of Education of the Farmers . . . . .	2-29
Table 2.17	Ownership of Appliances . . . . .	2-31
Table 2.18	Housing Conditions of Farmers Surveyed . . . . .	2-32
Table 2.19	Proportion of Farmers with One-room Houses . . . . .	2-33
Table 2.20	Staple crop yields by sample classification (quintals/mz.) . . . . .	2-34
Table 2.21	Agricultural production net income (all crops) by sample classification . . . . .	2-35
Table 2.22	Predicted Monthly Agricultural Income by Land Size . . . . .	2-36
Table 2.23	Net Agricultural Income as a Function of Area Planted . . . . .	2-37
Table 2.24	Income from Off-parcel Activities by Sample Classification . . . . .	2-38
Table 2.25	Frequency of Cattle and Dairy Ownership by Tenure Classification . . . . .	2-39
Table 2.26	Capital Goods by Sample Classification . . . . .	2-40
Table 2.27	Agricultural Practices by Sample Classification . . . . .	2-41
Table 2.28	Soil Conservation Practices by Sample Classification . . . . .	2-42

Table 3.1	Beneficiaries of Land Reform in El Salvador . . . . .	3-9
Table 3.2	Total Area in Agrarian Reform in El Salvador, by Region . . . . .	3-10
Table 3.3	Land Use, Reformed and Unreformed Sectors, 1987-88 and 1991-92 (in manzanas) . . . . .	3-12
Table 3.4	Land Use, Reformed and Nonreformed Sectors, 1987-88 and 1991-92 (in percent) . . . . .	3-13
Table 3.5	Yields of Several Major Crops, 1989-1993 . . . . .	3-14
Table 3.6	Farmland Area that Is Irrigable and Irrigated on ISTA Cooperatives (1990-91 and 1991-92) (in manzanas) . . . . .	3-14
Table 3.7	Area (in manzanas) and Percent of Cooperative Land Used for Natural Pasture and Unused Farmland, 1991-92 . . . . .	3-15
Table 3.8	Land Use on ISTA Cooperatives (1988-92) . . . . .	3-16
Table 3.9	Net Income from the Collective Enterprises, Payments on Defaulted Production Credit Due, and Average per-Capita Surplus Income from Collective Enterprises (1993 Sample of Agrarian Reform Cooperatives) .	3-17
Table 3.10	Type of Land Tenure Chosen in the ISTA <i>Nuevas Opciones</i> Program as of 1 July 1993 . . . . .	3-20
Table 3.11	Economic Situation of <i>Nuevas Opciones</i> Participant Cooperatives in Terms of 1991-92 Production . . . . .	3-21
Table 3.12	Mean Income per Member, Land Payment, and Amortized Defaulted Short-Term Credit under New Options, Surveyed Cooperatives (colones per member) . . . . .	3-22
Table 3.13	1992-93 Gross and Net Income Compared with 1991-92 Gross Income, with Farming Programs and Area in Export Crops per Member, Sample of ISTA Cooperatives (in constant 1993 colones) . . . . .	3-24
Table 3.14	Based on Gross Incomes, How Many Cooperatives under the <i>Nuevas Opciones</i> Program Could Have Made a Mortgage Payment in 1992-93?	3-25
Table 3.15	Membership, Settlement Capacity, Unused Agricultural Land, and Net Farm Income from Collective Enterprises on a Sample of "Abandoned" ISTA Cooperatives to be Resettled under the Peace Accords, May-June 1993 . . . . .	3-25
Table 3.16	Net Income, Production Credit Default, and Capacity to Make a Land Payment for a Sample of ISTA "Abandoned" Cooperatives (1992-93) . .	3-27
Table 3.17	Supply and Demand for Labor, Selected Sample of ISTA Cooperatives, 1992-93 . . . . .	3-28
Table 3.18	Mean Income Accruing to Cooperative Members, Sample of ISTA Cooperatives, 1993 . . . . .	3-30
Table 3.19	Production Credit Exonerated by the Government of El Salvador, Various Banks, ISTA Cooperatives, 30 June 1990 . . . . .	3-32
Table 3.20	Amount of Default on Production Credit and Those Who Use No Credit, 319 ISTA Cooperatives, 1991-92 . . . . .	3-33
Table 3.21	Exonerated Production Credit and New Default, Surveyed Sample of Operating ISTA Cooperatives . . . . .	3-34
Table 3.22	Exonerated Credit and New Default on Loans, Surveyed Sample of ISTA Cooperatives in the Abandoned Category . . . . .	3-35

6

Table 3.23	Original Mortgage Payments (interest plus principal) and Prices for Land, per Member, Survey Sample of ISTA Cooperatives (March 1980 and May 1993 prices) . . . . .	3-36
Table 3.24	Old and New Land Prices and Member Payments under <i>Nuevas Opciones</i> , Sample of ISTA Cooperatives . . . . .	3-38
Table 3.25	Mortgage Debt and Amount Paid (in 1980 colones) . . . . .	3-39
Table 4.1	Regression Estimation of Land Price on Time in 1993 Colones . . . . .	4-3
Table 4.2	Land Price per Manzana as a Function of Parcel Size . . . . .	4-6
Table 4.3	Average Land Sales Prices for Three-year Periods Since 1978 (1993 colones) . . . . .	4-7

## LIST OF FIGURES

Figure 1.1	Population of El Salvador by Age and Economic Activity . . . . .	1-10
Figure 1.2	Employed Economically Active Population of El Salvador, 16 and Older . . . . .	1-12
Figure 1.3	Agricultural Sector Population of El Salvador, 16 and Older . . . . .	1-14
Figure 1.4	Land Tenure in El Salvador, excluding landless . . . . .	1-15
Figure 1.5	Unpaid Family Workers, 16 years of age and older . . . . .	1-17
Figure 1.6	Occupations of the Agricultural Sector Population of El Salvador, 16 and Older . . . . .	1-18
Figure 1.7	Landless, Land Poor and Unemployed in El Salvador, Agricultural Population with Agricultural Jobs, 16 and Older . . . . .	1-22
Figure 1.8	Landless, Land Poor and Unemployed Agricultural Population of El Salvador, by Sex and Residence . . . . .	1-32
Figure 1.9	Residence, Sex and Land Tenure . . . . .	1-33
Figure 1.10	Land Tenure and Average Age of Farmer . . . . .	1-37
Figure 1.11	Land Tenure and Illiteracy . . . . .	1-40
Figure 1.12	Land Tenure and Education . . . . .	1-41
Figure 1.13	Total Monthly Average Income of Farmers in El Salvador (in colones) . . . . .	1-43
Figure 1.14	Total Monthly Average Per Capita Income of Farmers in El Salvador (in colones) . . . . .	1-46
Figure 1.15	Monthly Agricultural Income and Area of Land Worked, in Thousands of Colones . . . . .	1-47
Figure 1.16	Income and Land Tenure Type . . . . .	1-49
Figure 1.17	Agricultural Income and Land Tenure Type . . . . .	1-51
Figure 2.1	Renting Out of Land in El Salvador . . . . .	2-9
Figure 2.2	Average of Total Land Possessed . . . . .	2-10
Figure 2.3	Manner of Land Acquisition . . . . .	2-15
Figure 2.4	Average Duration of Possession of Parcel . . . . .	2-16
Figure 2.5	Idle Land as a Percent of Farm Land . . . . .	2-19

## LIST OF ACRONYMS AND MEASURES

BCR	Banco Central de Reserva / Central Bank
BFA	Banco de Fomento Agropecuario / Agricultural Development Bank
BT	Banco de Tierras / Land Bank
CENTA	Centro Nacional de Tecnología Agropecuaria y Forestal / National Center for Agricultural and Forestal Technology
FINATA	Financiera Nacional de Tierras Agrícolas [agency that implemented Phase III (tenants) of 1980 land reform]
FMLN	Frente Farabundo Martí para la Liberación Nacional / Farabundo Martí National Liberation Front
FFRAP	Fondo para el Financiamiento de la Reactivación de la Producción / Agricultural Debt Refinancing Program (BCR)
FUSADES	Fundación Salvadoreña para el Desarrollo Económico y Social / Salvadoran Foundation for Economic and Social Development
GOES	Government of El Salvador (mainly the executive branch)
ISTA	Instituto Salvadoreño de Transformación Agraria [Agrarian Reform Institute that implemented Phase I (large farms) of 1980 reform, creating collective units (cooperatives)]
MAG	Ministerio de Agricultura y Ganadería / Ministry of Agriculture and Livestock
NGO	nongovernment organization / organización no-gubernamental
OSPA	Oficina Sectoral de Planificación Agrícola / Agricultural Sector Planning Office [of MAG]
USAID	U.S. Agency for International Development

Exchange rate (July 1993)	US\$1.00	=	approximately C/8.80
Units of area	1 hectare	=	approximately 2.5 acres
	1 manzana	=	approximately 0.7 hectare

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## **EXECUTIVE SUMMARY**

It is both ironic and disturbing that El Salvador's 12-year civil war in which over 75,000 lives were lost and countless millions of dollars damage was done to infrastructure, precious little progress has been made in resolving one of the central causes of that war, namely the problem of landlessness among the peasantry.

The data gathered and analyzed by the land tenure team in El Salvador allow us for the first time since the decade before the war to have a clear picture of land tenure and agricultural labor in El Salvador. In that study we analyzed a sample of 18,000 Salvadorans conducted by the Ministry of Planning that contained excellent data on land and labor. We supplemented that data base with a special purpose survey of our own, now known as the 1993 Land Tenure Survey.

The best estimates are that in 1971, 65 percent of rural families in El Salvador were landless or land poor, defined as those who have less than .7 of a hectare of land. The data analyzed in this report show that in spite of El Salvador undergoing Latin America's most extensive non-socialist land reform, incorporating 280,000 hectares of land, or one-fifth of the total land area of the country, and 10 percent of the country's population, on the eve of the settlement of the civil war, 54 percent of the agricultural work force, or over 330,000 adults remained landless, land-poor or unemployed.

The peace accords that brought the war to its conclusion may at best, if they are fulfilled completely, eventually directly resolve the landlessness problem of some 75,000 adults, thereby leaving a residue of 255,000 adults, or 40 percent of the agricultural work force, landless, land-poor or unemployed. In absolute numbers, this is about the same number of Salvadorans who were landless or land-poor prior to the onset of the civil war.

Among those who do have land in El Salvador, about half are renters, a number far higher than had been estimated by USAID consultants in prior studies. There is clear evidence that over time there has been a steady increase of renting land, moving up from about one-third to one half of all properties, this in spite of the widely publicized Phase III of the land reform, the "land-to-the-tiller" law, modeled and designed by those who implemented a similar reform in Vietnam. Land owners have few incentives to sell at prices that renters could afford to pay. Steadily rising prices of land, a function of increasing population density, coupled with inflation-proof income generated from land rents, provide very little incentive for owners to sell. This finding is disturbing because renters have less land than do farm owners, and their agricultural incomes are lower, about two-thirds of the incomes of farm owners, even when controlled for farm size. The incomes of renters fall below the incomes earned in industrial jobs, whereas small landholders earn about the same as their industrial counterparts. Moreover, owners are twice as likely to plant permanent crops and more likely to use important conservation measures on their properties.

The peace accords call for granting land to a group of some 25,000 "tenedores," farmers who spent much of the war attempting to survive in the conflictive zones. These are the poorest segment of the rural population, and are highly politically alienated, as measured by our survey of public opinion. Progress on granting land to the tenedores has been very slow, and when finally accomplished will need to be accompanied by a large program of assistance.

The Land Bank was established as a mechanism to help vitalize the land market, but has been temporarily forced to direct its energies toward helping fulfil the terms of the peace accords. One of the effects of peace, however, is the appearance of rapidly rising land prices, although they have not yet reached pre-war levels. According to our studies, the increased prices will rapidly deplete the resources of the land bank, which were made available based upon land prices at the height of the war, leaving it unable to fulfill its initial goals.

Prospects for the outcome of the land reform being carried out as part of the peace accords need to be examined in light of El Salvador's prior experience with land reform carried out in 1980. Although some of the nations' best farm lands were turned over to cooperatives in that reform, only about half of the cooperatives generate sufficient income to be able to make a land payment, and only 3.3 percent of the land debt has been paid in spite of the fact that average mortgage payments have been reduced by a factor of five due to inflation since 1980. Default on production credit remains a major problem on cooperatives even after a major exoneration of outstanding credit in 1990.

These stark conclusions need to be placed within a more general context of four key factors constraining El Salvador's ability to deal with the implied policy challenges.

First, El Salvador is extremely small and densely populated. With a total size of 21,000 Km<sup>2</sup>, it is the smallest country in mainland Latin America, and is even smaller than the Caribbean Island of countries Cuba, Dominican Republic, and Haiti. With a population of over five million, its density of approximately 240 people per Km<sup>2</sup> exceeds that of Haiti (225/Km<sup>2</sup>). If El Salvador were to attempt to provide to the landless, land poor, and unemployed population the same amount of land being given to the Peace Accords beneficiaries, namely 3.5 hectares each, it would require 1.2 million hectares of land, or 56 percent of the total land area of the country. In short, El Salvador has too many people and too little land to be able to effectively address the problem of landlessness.

Second, the scarcity of land is further exacerbated by the severe environmental degradation that much of El Salvador has suffered in recent years. This country has the smallest proportion of its land in forest of any country in mainland Latin America. Its rivers are contaminated and its soils subject to extreme erosion. Ironically, however, the hostilities of the civil war prevented many farmers from cultivating their fields, and as a result, some areas have been left fallow thereby allowing secondary growth to return and soil erosion to be reduced. Furthermore, pesticide use has dropped as a result of the decline in

cotton prices that has virtually eliminated the planting of that crop in the coastal lowlands. Nonetheless, with the war over, it can be expected that within a few years farming activity will return to normal levels and environmental degradation will again accelerate.

Third, El Salvador has committed itself to a set of neo-liberal policies that favor lowered tariffs, regional economic integration, and competition on the world market. Significant progress has been made in the agricultural area that promises to stimulate the flow of agricultural goods within Central America (or at least between Guatemala, El Salvador and Honduras). As a result, competitive pressures have increased on farmers in El Salvador. In addition, the lowered tariffs on manufactured goods are likely to decrease demand within El Salvador for some of its less competitive goods while production sharing employment in maquiladoras is likely to increase. This shift in industrial employment is likely to result in an overall increase in jobs, but at lower wages. As a result, industrial employment is becoming an increasingly less attractive alternative to agriculture than it might have been.

Fourth, capital constraints recently have become far more serious in terms of medium to long-run economic assistance. With the ending of the Cold War there has been a dramatic reduction in the geo-political importance that Central America holds for the United States. Coupled with the severe budgetary pressures facing Washington prompting a reexamination of foreign aid expenditures, and similar constraints in Japan, make it difficult to imagine that the levels of foreign assistance available to El Salvador in the 1980s will be replicated in the second half of the 1990s.

What, then, are the policy options? The specific recommendations are found in the individual chapters. Here we concentrate on overall policy.

In terms of the landless, land poor, and unemployed population, we see very little opportunity for these individuals in traditional, smallholder agriculture. There are simply too many people and not enough land. Therefore, we see two options, one rural and the other urban.

In rural El Salvador the most attractive alternative to small landholding is employment in agroindustry. The question, of course, is which crops and for what markets? We have no ready answer to this question, one that is beyond our scope of work on land tenure. What we do know is that such options will need to be explored. A second option in the countryside is for rural factories, including assembly industries. Fortunately, much of El Salvador is readily accessible by good roads, so transportation is not a major problem. Nonetheless, many bridges were destroyed during the war, most notably the major east-west spans crossing the Rio Lempa. The temporary Bailey bridges now in use there are single lane spans that ultimately will have to be replaced by conventional bridges if industrial traffic builds appreciably. Apparently, the government of Japan has an interest in lending money to rebuild these spans. We support such an effort. The electric grid was also damaged during the war, but many posts have been replaced and service has been restored. Electric service

is still prone to frequent interruptions, but as the war damage is overcome such events should become less frequent. In any event, nearly all areas of significant population concentrations have electric service, so that rural factories are feasible throughout most of the countryside.

Urban factories offer a third option for the landless, land poor, and unemployed. At the moment, most of those factories are concentrated in the heavily overcrowded San Salvador area. Far less taxing on the urban infrastructure would be factory expansion in the cities and towns both east and west of San Salvador. But again, we confront the problem of the product and the market. We are in no position to make recommendations on that question.

Among the landed population, we divide our recommendations by tenure type, but first concern ourselves with the problem of tenure security. The tractional land registry system, our study concluded, was so deficient that it would be impossible to reform. Efforts to do so have been made in the past and have failed. In particular, the efforts to replace the "folio personal" with the "folio real" (registration of the owner vs. registration of the property) have not met with significant success, and in any event have been restricted exclusively to the registry in San Salvador, leaving much of the rural property excluded from the more modern system.

On the positive side, however, El Salvador has seen the establishment of the highly efficient and successful "Registro Social de Inmuebles," which thus far largely has limited itself to registering urban properties in housing projects. The highly advanced computerized technology developed in that project could be expanded to incorporate all of El Salvador and slowly replace the existing antiquated registry. In order for that to happen the National Cadastre Office would require a major infusion of cash to be able to complete the national cadastre initiated with USAID funds in the 1970s and to upgrade the sections of that cadastre completed before the war broke out. Funds would need to be made available to guarantee compatibility between the computerized system of the cadastre and the registry. But those are technical problems that the Salvadoran agencies involved have studied and understood quite well.

If the new land registry were expanded, then problems of tenure insecurity could be greatly minimized. Moreover, the new system seems fully capable of providing an overall land use information system that could benefit the expanding needs for municipal revenue. Municipal governments have greatly increased their capabilities and functions under the reforms approved in 1986 and the fiscal reforms of 1992. They took on responsibility for numerous local infrastructure rehabilitation in the context of the Municipalities in Action (MEA) program. The legal requirement that all such projects be presented by citizens in open town meetings (cabildos abiertos) has made these efforts far more participatory than any previous local infrastructure efforts. The MEA funding is being reduced as ESF funds are being reduced to El Salvador. A revitalized cadastre could help municipal government replace the external funds via a land tax.

Turning now to the specific segments of the landed population, in need of greatest attention are the renters. The land rental laws that are on the books do not provide sufficient security guarantees to renters and owners, and in any event are so cumbersome that they are unenforceable. New rental legislation has been proposed in the new agrarian code (the Código Agrario), but as of this writing the code is still a long way from being finalized and formally debated by the legislature.

Of particular concern, given that half of all of those with access to land are renters, are the environmental implications of extensive renting. USAID in its newly expanded emphasis on the environment (as well as other donors) must seek ways to create incentives for rental property to be used in an environmentally sound fashion. At present no such incentives exist.

Former renters, called FINATEROS, have been woefully delinquent in paying their land debt even when that debt is trivial by historical standards. FINATEROS were born in Phase III of the 1980 land reform and need to become a part of the regular system of land owning in El Salvador. To make this possible, they must either pay off their mortgage debt or have it exonerated. Our feeling is that while the principle of paying for the land is a good one, as a practical matter it might be best to wipe off this debt and sever the links between FINATA and the former renters.

The "tenedor" population of the peace accords are a particularly troubling group. Their poverty and political alienation give them the potential to create civil unrest in the not-too-distant future. This group needs to be targeted for special assistance, both in short-term subsistence credit and longer term technical assistance and production credit.

We believe that resources should be shifted away from the reformed sector (i.e., the beneficiaries of the 1980 land reform) toward the tenedor population. The reformed sector absorbs far too many resources for far too little return to make its continued subsidization developmentally prudent. Moreover, dependency ties between ISTA (the land reform agency) and the reform cooperatives need to be attenuated and broken.

We are encouraged that the "nuevas opciones" (new options) that have now been passed into law in El Salvador might provide the mechanisms for breaking this dependency and cutting the subsidies. The reform cooperatives may now choose between several options that would allow them to take more direct responsibility for their land. One of these options is an interesting shareholder arrangement called "participación real." Our studies of these options, however, did not allow us to conclude that any one of them appeared more promising than any other because not enough time had yet passed for the data to be available. We feel that this process would be accelerated if the cooperatives were given unequivocal signals that their subsidies were ending and were going to be invested in the tenedor population.

We are concerned that there appears to be lower female participation in the ISTA cooperatives than in agriculture as a whole. This may reflect a selection bias on the part of ISTA or a dynamic attributable to the cooperatives themselves. In either event, it is an issue that must be raised and resolved.

A recommendation that we can make that applies to all of the farmers in all land tenure categories is that far more needs to be done to invest in human capital. Educational levels were low among all categories of farmers; even among farmers who employ workers, 42 percent were illiterate, and among small farmers with no workers employed, 52 percent were illiterate. Average years of schooling among the agricultural population in El Salvador hovers around three years. Among the land poor it drops to two years. Moving these farmers into the factory setting is going to be difficult. For the most part, the illiterate farmers will not be employable in factory settings. Indeed, given the increasing technical requirements in agro-industry, there may be little role for the illiterate population. Faced with this reality, El Salvador has little choice to embark upon a major adult literacy campaign to better position this work force for the challenges ahead. Absent such a program, there will be precious few options for the illiterate 43 percent of the agricultural population.

This study is only a first, tentative attempt to understand the size and complexity of the land tenure problems facing El Salvador. It is limited by its snap-shot look at the problem, necessitated by the availability of a single year of data on which the analysis had to be conducted. But as of this writing, the 1992-93 MIPLAN survey is being made available, and its analysis is to be recommended in the strongest terms. Ideally, a consortium effort could be established involving MIPLAN and the Ministry of Agriculture, and some private external bodies such as FUSADES, CENETEC and some Salvadoran universities interested in the subject. When the agricultural census is finally conducted and the data available from that source, a fuller picture will become available to this group. Now, however, virtually no such analysis is underway or contemplated. The studies that are available in El Salvador are merely warmed over restatements of old data sets, especially the 1987-88 McReynolds report cited frequently in this report. Few poor, small countries possess the magnificent resources of the MIPLAN survey unit, but it is disappointing to see how little use is being made by Salvadorans (and indeed international donors) of that resource. USAID has long supported the MIPLAN unit, but has failed to take full advantage of the data produced by it. Only by having accurate, current data can we hope to be able to make informed policy.

Finally, we conclude by expressing a sense of optimism despite the magnitude of the problems El Salvador is facing. Although the civil war did not resolve the economic issues that were central to the outbreak of hostilities in the first place, it did resolve another, far more profound issue. The peace agreements settling the civil war have granted to all Salvadorans basic human rights and political rights that cannot be violated with impunity. The use of massive state-supported or state-condoned violence against the civil population in the early 1980s only served to pour gasoline on the flames of social protest in El Salvador. That lesson has been learned, albeit painfully, by a broad spectrum of the Salvadoran

leadership. Furthermore, the ending of the Cold War has made it obvious to all that absent external interference in El Salvador's affairs, there remain genuine social and economic problems that need to be resolved.

With the peace accords in place, those who disagree with government policy designed to resolve those social and economic problems now are guaranteed the right to organize, form parties and vote the "bums" out of office. They can do so knowing that the military has been deligitimized as an actor in the restriction of these rights. We hasten to add that the military remains a powerful organization in spite of its reduction in size and the purge of the senior officers most involved with human rights violations and corruption. But we believe that the military now has a changed mission and will likely respect the new open and democratic political process that is emerging in El Salvador. That process, given the vast energies and creativity of the Salvador people, will go a long way to making that tiny country a better, more peaceful place to live.

## **1. A PROFILE OF THE LANDLESS, LAND POOR, AND UNEMPLOYED AGRICULTURAL POPULATIONS IN EL SALVADOR**

Agricultural development policies must, if they are to be effective, address the issue of land tenure. In El Salvador, the most densely populated country in mainland Latin America, land tenure issues have often dominated almost all other aspects of agricultural policy. Indeed, the rebel forces who waged the recently concluded twelve-year civil war frequently justified their struggle on the inequity of land distribution in El Salvador. Today, however, the civil war is over and explicit measures have been taken as part of the peace process to resolve some of the most pressing land tenure problems. Coupled with the land reform of 1980, El Salvador has undergone what may be the most extensive land reform of any nonsocialist country in Latin America.

To develop effective policies that take appropriate cognizance of land tenure issues, it is vitally important that decision makers have available to them a comprehensive picture of the patterns of land ownership and landlessness in the country. In El Salvador, unfortunately, the absence of recent agricultural census data has thus far made it impossible to obtain such a picture. Using new data, this report attempts to fill that lacuna. Because the data are not based on a census but only on a sample, albeit quite a large and comprehensive sample, this report includes detailed explanations of the assumptions that underlie the analysis so that the reader can understand the basis for the principal conclusions. The sample consists of the largest and most comprehensive survey of the population ever undertaken in El Salvador, namely, the 1991-92 Multi-Purpose Household Survey of the Ministry of Planning (MIPLAN). In the absence of agrarian census data more recent than 1971, this data set provides a vital source of information for policymakers and international donors.

The central conclusions are as follows:

- Of a total population of 5.2 million people (1991-92), there were 1.6 million economically active adults (individuals 16 and older). Of those, 34 percent, or 544,099 were employed in the agricultural sector, of whom 523,368 performed agricultural tasks.
- An additional 58,293 Salvadoran working-age adults were unemployed, yielding a total agricultural work force (employed and unemployed) of 581,661. Of the total agricultural work force, 10.2 percent were unemployed<sup>1</sup> in 1991-92.
- Of the total agricultural work force, 169,432 (29%) were landless and an additional 85,361 (15%) were land poor (defined as individuals who work less than 1 manzana, or 0.7 hectares). In this report, landless workers are defined to exclude all workers who have permanent wage-labor employment.

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<sup>1</sup>Unemployed workers are defined by MIPLAN as those individuals who did not work in the week prior to the survey and who did not have some regular job from which they were absent because of ill health or other reasons.

- The landless, land poor, and unemployed total 313,002, which when expanded to include the estimated 8.2 percent of the population not covered in the MIPLAN survey, total 338,668 adults, or 54 percent of the adult agricultural work force.
- Among the economically active agricultural population, only 20 percent worked more than 0.7 hectares of land or were members of a cooperative.
- To place these figures in perspective, it should be kept in mind that the total number of beneficiaries of the 1980 land reform was some 79,000 (27,000 in Phase I and 52,000 in Phase III). The peace accords, if fulfilled in their entirety, provide for an additional 47,500 beneficiaries of the reform process, some of whom will be settled on Phase II land, others to be settled on Phase I land, and still others on newly acquired land. Thus, more than a decade of land reform may resolve the land hunger of some 125,000 Salvadorans and their families (about one-half million people); that is, about one-third of the 1991-92 agricultural work force who were landless, land poor, or unemployed.
- Phase III (Decree No. 207) of the 1980 Salvadoran land reform, the so-called Land-to-the-Tiller program, held that indirect tenancy (especially renting and sharecropping) violated the principle of the social function of land and provided for the conversion of most indirect tenants into fee simple owners. The restrictions on renting were lifted by 1982, however. By 1991-92 the single most common form of land tenure in El Salvador was renting and sharecropping. The report found that 106,000 renters and sharecroppers, or about half of all those who had access to land, were renters.
- Fewer than one-third of those who work land did so as fee simple owners.
- Land tenure had a direct influence on income; fee simple landowners had the highest incomes, even when controlled for the amount of land owned. Renters had the lowest incomes of any group.
- Incomes of farmers with access to land, excluding renters, are above the national average, whereas those with no direct access to land are substantially below the national average. On a per capita basis, the national monthly income average in 1991-92 was 367 colones; among the land poor it was 237, among the permanent agricultural wage laborers it was 205, and among the temporary agricultural wage laborers it was 166. Among the landed, fee simple landowners earned a per capita average of 603 colones per month, whereas renters earned 302.
- Fee simple landowners with 1-4 manzanas (mz.) of land earn incomes that exceed steady wage work in the industrial sector, whereas those who own less than 1 mz. earn only about half the daily wage in the industrial sector. Indeed, total incomes

of those who own less than 1 mz. are only 62 percent of the income of those who work industrial sector wage labor jobs.

- Farmers who rent at least 5 mz. of land earn more than wage laborers in the industrial sector.
- The derivation of the 1991-92 landless, land poor, and unemployed population in the agricultural sector is summarized in the following chart:

Categories	Numbers	Comments
Total Population, 1991	5,166,200	
of whom, those 16 and older...	2,918,746	
of whom, those economically active...	1,633,993	
of whom, those who are employed in the agricultural sector...	544,099	
of whom, those who are employed and hold agricultural jobs...	523,368	
of whom, those who are landless temporary day laborers...	169,432	Note that 4,730 workers own 1 to 4 mz. of land and are therefore excluded as landless
to which is added the unemployed agricultural workers...	58,209	
yielding a total of landless and unemployed...	227,641	
to which is added the land-poor small farmers...	85,361	Note that this includes those who report no land as well as those with less than 1 mz. of land
yielding a total of landless land poor and unemployed in the agricultural sector of. ...	313,002	
which, when increased by the 8.2% undercounting of the sample, yields...	338,668	
which in relative terms, the percent of landless, land poor and unemployed within the agricultural work force is...	54%	The denominator for this calculation is produced by adding the 523,368 individuals in the agricultural sector with jobs in agricultural occupations plus the 58,209 unemployed (581,661)

## 1.1 How Many Landless, Land Poor, and Unemployed Are There in El Salvador?

Landless, land poor, and unemployed peasants are often seen as the source of the social dynamite that has fueled many of the peasant wars of the twentieth century.<sup>2</sup> Modern peasant wars in China, Vietnam, Cuba, Nicaragua, and El Salvador have all had struggles over land as one of their central elements. Huntington, in his classic book on development and stability, articulates the explanation for these agrarian revolutions: "Where the conditions of land-ownership are equitable and provide a viable living for the peasant, revolution is unlikely. Where they are inequitable and where the peasant lives in poverty and suffering, revolution is likely, if not inevitable, unless the government takes prompt measures to remedy these conditions."<sup>3</sup>

In this report, I estimate the number of the landless, land poor, and unemployed in the agricultural population, and then describe them according to their age, sex, education, income, uses of credit, and other key characteristics. In accomplishing this objective I also describe the landed population in terms of its size, socioeconomic and demographic characteristics, and land tenure characteristics.

There is much confusion about the size of the landless population. One of the most influential documents on El Salvador's experience with land reform was the 1981 Oxfam "Impact Audit," in which it was claimed that "65 percent of the population is landless." The denominator for this estimate was not provided, however, and therefore it is not clear if this was 65 percent of the entire population, the economically active population, the rural population, or the agricultural population.<sup>4</sup> In fact, an examination of the footnote to that article reveals a source from 1976 that is based upon preliminary tabulations of the 1971 agricultural census. According to that source, 29.1 percent of *rural families* were landless, not, as was claimed by

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<sup>2</sup>The term "peasant wars" was first used by Eric Wolf in his classic study, *Peasant Wars of the Twentieth Century*. New York: (Harper and Row, 1969). Wolf, himself, however, believed that the major source of rebellion was the so-called "middle peasant," the smallholder living in isolated mountain redoubts.

<sup>3</sup> Samuel P. Huntington, *Political Order in Changing Societies*. New Haven: Yale University Press, 1968, p. 375. Prosterman and Reidinger (1987:10) explain the connection this way: "Land is the chief source of livelihood, security and status for most people in the less developed countries.... Thus, it should not be surprising that in many societies the principal subject of grievances and the principal occasion for blame should be land-related; specifically, that a very high proportion of the most violent twentieth-century civil conflicts should have occurred in situations where a substantial percentage of the population were blocked, by human agents, from having a secure and remunerative relation with the land they tilled."

<sup>4</sup>Laurence R. Simon and James C. Stephens, Jr., *El Salvador Land Reform, 1980-1981: Impact Audit* (with 1982 supplement by Martin Diskin). Oxfam America, Inc, 1982, p. 1. The source cited is Melvin Burke, "El sistema de plantación y la proletarización del trabajo agrícola en El Salvador," *Estudios Centroamericanos* (September-October, 1976), pp. 473-86.

Oxfam, 65 percent. One could (and perhaps should) add to this estimate of landlessness an additional 34.6 percent of rural families who owned less than 1 hectare of land, for a total of 63.7 percent of the *rural population* that was either landless or land poor in 1971. That comes close to the Oxfam estimate; nearly 65 percent of *rural families* were landless or land poor in 1971. In terms of raw numbers, this amounts to 112,108 landless and 132,907 land poor out of a total of 348,859 rural *families* (not individuals).<sup>5</sup> No data are given on the unemployed.

Roy Prosterman, reputed author of the Land-to-the-Tiller legislation (Phase III) of the Salvadoran land reform of 1980, is a major advocate of the link between land inequality and violence throughout the world, especially in El Salvador.<sup>6</sup> Prosterman's frequently cited calculations for the period just prior to the land reform of 1980 put the landless and land poor population at 30-37 percent of the total labor force, a figure among the highest in the world.<sup>7</sup> If this is a reliable estimate, it would mean that in 1991-92 there were as many as 592,000 landless and land poor peasants in El Salvador. The Prosterman calculations have not gone without criticism, however.<sup>8</sup> Other, higher estimates include one developed by UNDP, which found that by 1980, 51.3 percent of rural families were landless.<sup>9</sup> Another more recent study is based on a sample so small that its reliability is seriously in question.<sup>10</sup> The most frequently

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<sup>5</sup>See Burke, 1976, p. 475.

<sup>6</sup>Roy Prosterman and Jeffrey Riedinger, *Land Reform and Democratic Development*. Baltimore: Johns Hopkins University Press, 1987. For data see p. 26. See also Prosterman, "IRI: A Simplified Predictive Index of Rural Instability," *Comparative Politics* 8(1976), pp. 339-54 and Prosterman and Riedinger, "Toward an Index of Democratic Development," in *Freedom in the World: Political Rights and Civil Liberties*, ed., Raymond D. Gastil. Westport, CT: Greenwood Press, 1982.

<sup>7</sup>Comparative data and method of calculation are given in Edward N. Muller and Mitchell A. Seligson, "Insurgency and Inequality" *American Political Science Review*, Vol. 81, June, 1987, pp. 445-447. Most nations have far lower numbers.

<sup>8</sup>One of the most recent critiques is Charles D. Brockett, "Measuring Political Violence and Land Inequality in Central America," *American Political Science Review*, Vol 86 (March, 1992), pp. 169-176. It should be noted, however, that Brockett's argument is consistent with that of Prosterman, assigning to El Salvador a score of 100 on his index of "relative rural disruption potential," the highest of any country in Central America.

<sup>9</sup>As cited by Raúl Ruben, *El problema agrario en El Salvador: Notas sobre una economía polarizada*. Cuadernos de Investigación, No. 7, Año 11, Abril, 1991, Centro de Investigaciones Tecnológicas y Científicas, Dirección de Investigaciones Económica y Sociales. San Salvador.

<sup>10</sup>The sample size was 162 distributed in seven of El Salvador's 14 departments. See Oscar Morales Velado, *Familiar pobres zonas rurales del oriente y occidente de El Salvador: Características sociológicas y económicas*. Cuadernos de Investigación, Año II, Agosto, 1992, Centro de Investigaciones Tecnológicas y Científicas (CENITEC), Dirección de Investigaciones Económicas y Sociales, San Salvador.

cited study, the so-called McReynolds Report, combines five data sources, three of which were conducted in 1987-88 by PERA (Proyecto Planificación y Evaluación de la Reforma Agraria) with a sample size of 2,694, a small renters survey conducted by CLUSA, and the 1971 census of Agriculture.<sup>11</sup> While this very impressive effort contains a great deal of valuable information on land tenure and agriculture in general, its sampling frame was the farm rather than the household, so it cannot provide a reliable estimate of landless and unemployed populations. In addition, and in many ways more important, the PERA sampling frame was based entirely on the Instituto Geográfico Nacional cadastral lists, the accuracy and currency of which has not been studied. Another impressive effort, the Gore Report is based on a restudy in 1987 of 789 households in rural El Salvador that were first interviewed in 1978.<sup>12</sup> While that survey includes both landed and landless, the limitation of the sample to that segment of the population that was living in the same general area in 1987 as it was in 1978 creates several problems. It excludes those who migrated in the nine years from 1978 to 1987. It also excludes younger families, those that had not formed by 1978. Hence, the sample represents a more stable, older component of the rural population than is actually present in the population as a whole.

A source of social revolution or not, landless, land poor and unemployed peasants in an economy that depends heavily upon agriculture for income, represent a serious social and economic problem. In societies that have not undergone land reforms, experts often readily recommend them as a solution to widespread landlessness. But in El Salvador, a country that has undergone two major land reforms in a little over a decade, and in which land fragmentation is already a very serious problem, such a recommendation would be irresponsible and politically infeasible.

Conversations with numerous Salvadorans and representatives of international organizations produced dramatically different estimates as to the size of the landless/land-poor problem in El Salvador in the post-civil war period. Several individuals argued that since the land reform associated with the Peace Accords will provide land to thousands of peasants, and since many of Salvador's poor have migrated to the cities, the United States, and elsewhere, the problem essentially has been resolved. Others have taken the opposite view, suggesting that the land problem has only been solved for those who fought in the war, ignoring almost entirely those in the name of whom the war was fought.

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<sup>11</sup>Samuel A. McReynolds, Thomas M. Johnston, Peter H. Gore and Joe D. Francis, "The 1989 El Salvador Agricultural Land Use and Land Tenure Study." Washington, D. C.: National Cooperative Business Center, November, 1989, typescript.

<sup>12</sup>Peter H. Gore, Samuel A. McReynolds, and Thomas M. Johnston, "The 1987 Resurvey of the 1978 El Salvador Non-Metropolitan Household Study." Washington, D. C.: National Cooperative Business Association, June, 1987, typescript. It should be noted that the sample frame utilized was that of the Multi-Purpose Household Survey, the same one used in this report.

### 1.1.1 Data Base

Prior to 1992, the only data available for analysis of population and agricultural statistics in El Salvador were derived from the 1971 population and agricultural censuses, out-of-date estimates, and incomplete survey data.

Although a new population census was undertaken in 1992, the data were not useful for determining landlessness in this report because (1) it was not tabulated at the time this report was written and (2) it does not contain by itself sufficient information to make a reasonable estimate of landlessness in El Salvador.<sup>13</sup> The 1992 census data eventually can be used to estimate how many Salvadorans work in agriculture, and of those how many are salaried and how many are unemployed. This information can in turn be used to correct the expansion factors that were used to weight the samples in this report.

Information on land ownership, however, which is necessary to estimate landlessness, is not included in the population census data.<sup>14</sup> To estimate landlessness, therefore, the data from the 1992 population census must be linked with the data from the upcoming agriculture census; that is information about an individual from the population census must be linked with information about his/her farm from the agriculture census. Thus, the agriculture census questionnaire must be carefully designed to enable the data to be linked with the data from the 1992 population census. Unless this is done, all opportunity to link the two censuses will be lost. In the future, to make this linkage automatic, both censuses should be carried out at the same time by the same interviewer; that is, the interviewer should fill out two questionnaires during the interview, one for the population/housing census and another for the agricultural census.

Despite the absence of current usable census data, I obtained a very useful surrogate. The Ministry of Planning, Survey Sampling Unit, since 1985 regularly conducts a Multi-Purpose Household Survey (MPHS). The first study (1985) was national in scope, but had numerous flaws, many caused by the war, and it is not considered reliable by MIPLAN. In 1986 the study was limited to the Metropolitan area of San Salvador. Between 1988 and 1990-91, the study was expanded to include all of the urban areas of El Salvador. Finally, in October 1991 through March 1992, the first nation-wide Multi-Purpose Household Survey was undertaken. The total number of households visited was increased from 7,000 in previous years to 20,000, and in each

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<sup>13</sup>Estimations of the number of males and females, based on a small sample of the census have been released, but the computerization of the entire census itself is not far along as of this writing.

<sup>14</sup>See the "Boleta Censal" for the "Censos nacionales V de población y IV de vivienda," Dirección General de Estadística y Censos, Ministerio de Economía, San Salvador.

household extensive employment information about all individuals ten years of age and older was recorded.<sup>15</sup>

The sample design utilized five strata, each representing one of the five regions into which the country is divided. Each stratum had a sample size of 4,000. Within each stratum the sample is divided into urban and rural components, and Probability Proportional to Size (PPS) criteria were used within each stratum to draw the sample. Within each region, the sample is self-weighting, but to construct an overall picture of El Salvador, additional weighting was performed. Nonresponse was approximately 18 percent.

Despite its obvious advantages over other sources of data, the MPHS survey is not perfect.<sup>16</sup> The civil war was still ongoing when it was undertaken, and therefore 40 of the 262 municipalities, distributed among 7 of El Salvador's 14 departments, were excluded. The 1971 population census counted 273,365 people in these municipalities, or 8.2 percent of the population.<sup>17</sup> When the full 1992 census data are released at the level of the municipality, it will be possible to determine more precisely how large an impact this exclusion had on the 1991-92 MPHS. It is unlikely that the proportion of the population excluded from the MPHS increased significantly from the proportions given in the 1971 figures, and it is quite probable, given historical trends toward urban migration and the rural exodus produced by the armed conflict, that the population in the areas excluded declined relative to the population of El Salvador as a whole. In 1965, the World Bank reports that El Salvador was 39 percent urban, while by 1990 44 percent of the population lived in cities.<sup>18</sup> Further, between 1980 and 1990,

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<sup>15</sup>Information about all members of the household was taken, including data on sex, age and educational achievement. Employment data were taken for all individuals, 10 years of age and older.

<sup>16</sup>Note that preliminary versions of this reported, with dates prior to July 23, 1993, were based on a version of the MIPLAN data set prepared for this analysis that contained a systematic error resulting in an overestimation of the total size of the population under study. That error mainly related to unpaid family labor rather than the other categories analyzed in this report (landless, land poor and unemployed). Most of the numbers in this revised version, however, have been modified from the earlier versions to correct for that error.

<sup>17</sup>The excluded areas are: Chalatenango (Arcatao, San Isidro Labrador, Nueva Trinidad, Las Flores, Nombre de Jesús, San Antonio Los Ranchos, El Carrizal, San Antonio De La Cruz, Las Vueltas, Potonico, Cancasque, Ojos de Agua, San Fernando); Cuscatlán (Tenancingo, Suchitoto); Cabañas (Cinquera) Usulután (Jucuarán, San Augustín); San Miguel (San Luis De La Reina, Carolina, Nuevo Edén de San Juan, San Gerardo, San Antonio); Morazán (San Isidro, Gualococti, San Simón, Corinto, Jocoaitique, El Roasrio, Joateca, Meanguera, Arambala, Perquín, San Fernando, Torola) and La Unión (Meanguera del Golfo, Anamorós, Nueva Esparta, Polorós, Lislique).

<sup>18</sup>World Bank, *World Development Report, 1992*. New York: Oxford University Press, 1992, p. 278.

net international migration produced a negative balance of 594,415.<sup>19</sup> In any event, the exclusion of this small proportion of the population is not likely to affect the overall results significantly. With all of its weaknesses, the MPHS provides a far more precise estimate of landlessness than has been available to date.

### 1.1.2 Defining the Landless

The definition of the landless population begins with a redefinition of the economically active population. I want the estimates of the number of landless to be conservative because the estimates developed here have explicit implications for public policy and the expenditure of public funds. Unless the procedure that I have followed—as described below—is used, the estimated size of the landless/land-poor population could be artificially large. Specifically, the Ministry of Planning classifies all people 10 years of age and older as economically active, except for those who are students, housewives, retirees, invalids, prisoners, and so on. I do not object to the use of such a definition when applied to the population as a whole, but including the very young among the landless inflates the size of the landless population. In many cases, young people live at home with their families and have no immediate interest in acquiring their own farmland. In some cases they expect to inherit their parents' land, in other cases they may marry and receive land from their spouse as part of a dowry. Mortality also will reduce the pool because some young people will not live to adulthood. The fact is, there is simply no way to know how many 10-year-olds will eventually end up as landless adults. As a result, we have more strictly defined the landless and land-poor population by excluding all those younger than 16 years of age. By the age of 16 many Salvadorans are moving toward marriageable age (indeed, many are married or living in a common-law union by the age of 16), and the setting up of an independent household and an independent income stream is in the immediate future for most of this cohort. The following charts show the impact on the population estimates of limiting the focus to the economically active population 16 years of age and older.

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<sup>19</sup>The migration data are from Ministerio de Planificación y Coordinación del Desarrollo Económico y Social, Ministerio de Economía, Dirección General de Estadística y Censos (DIGESTYC), y Fondo de las Naciones Unidas para Actividades en Material de Población (FUNAP), "Estimaciones y proyecciones de población, 1950-2025," San Salvador, noviembre, 1986, p. 13. The PERA study previously cited concludes that the number of farms in El Salvador increased from 270,868 in the 1971 census to 286,183 in the 1987 sample survey, an increase of only 5.6 percent despite a national population growth of approximately 40 percent during this same period, and an increase of 114 percent in the Department of San Salvador from 1971-1992. For population data see Ministerio de Planificación y Coordinación del Desarrollo Económico y Social, Dirección General de Población y Desarrollo Territorial, Dirección de Población, "Estimación de la población de El Salvador por departamento y municipio (Cifras preliminares), San Salvador, mayo, 1992, mimeo, cuadro 10. For farm data see Ministerio de Agricultura y Ganadería, Oficina Sectorial de Planificación Agropecuaria, Proyecto Planificación y Evaluación de la Reforma Agraria, Doc. 1/01/89, "Estudio nacional del sector agropecuario, Encuesta sobre uso y tenencia de la tierra, Vol. 1, Análisis de resultados," San Salvador, enero, 1989 p. 8.

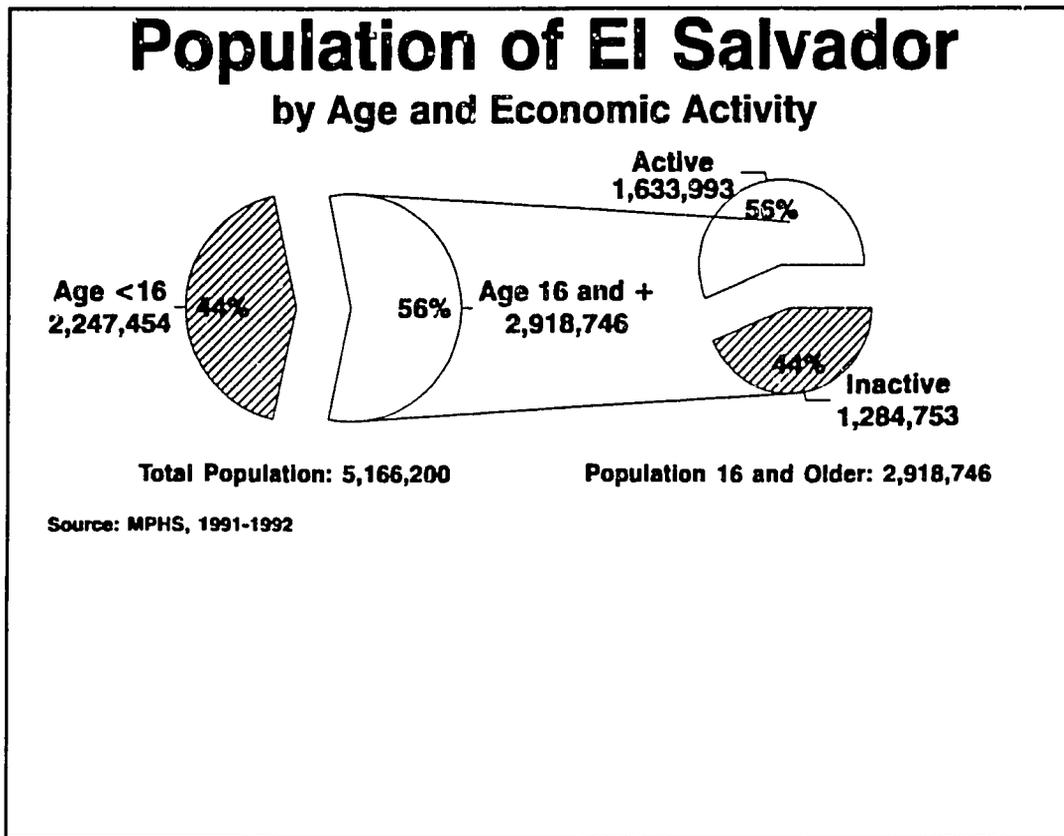


Figure 1.1 Population of El Salvador by Age and Economic Activity

Of the total population of 5.2 million, 2.9 million people are 16 years of age and older. The World Bank's estimate is slightly lower: 2.7 million for those aged 15-64.<sup>20</sup> The World Bank estimate includes 15-year-olds, who are excluded from our calculation, but excludes all those over 64 years of age, which are included here. Hence, the World Bank and the MPHS estimates are quite close. Of those 16 and older, 1.6 million (56%) are economically active. The United Nations (UN) reported that in 1985, 49 percent of the population 10 years of age and older were economically active.<sup>21</sup> Although this estimate is lower than that given by the MPHS, individuals between the ages of 10 and 15 are far less likely to be part of the work force and therefore the UN figures would be expected to be lower than ours. That is, if the UN estimate had been made on the more realistic 16 years of age and older, then the percentage of

<sup>20</sup>World Bank, *World Development Report*, 1992. New York: Oxford University Press, 1992, p. 268.

<sup>21</sup>Economic Commission for Latin America and the Caribbean, United Nations, *Statistical Yearbook for Latin America and the Caribbean*, 1990. Chile, March, 1991 (UN sales number E/S.91.II.G.1), p. 20.

that age group that was economically active would have been higher than the UN estimate for those 10 years of age and older.

A breakdown of the employed population by field of activity is shown in Figure 1.2. Thirty-three percent of the employed economically active population works in agriculture,<sup>22</sup> which is the largest sector of the population, followed by services. The employed economically active labor force, 16 and older, in the agricultural sector totals 544,099 people. Comparing these results with the most recent official data presented in 1991 by the United Nations, shows 43 percent in the agricultural sector.<sup>23</sup> The United Nations data, however, are for 1980, and are therefore eleven years older than the results in this report. The 1970 United Nations data showed that 56 percent of the Salvadoran population was engaged in the agriculture sector, a 13-percent drop in that ten-year period. Between 1960 and 1970 the United Nations figures show a 5.5 percent drop from 61.5 percent to 56.0 percent. The 5-percent decline from 1980 to 1991-92 is reasonable because it was during the late 1960s and 1970s when El Salvador made its greatest strides toward industrialization. With the 1980s came the civil war, decline in foreign investment, and a shifting of government investment away from economic development and into the war effort. As a result, while one would expect that the agricultural sector would continue to shrink in the 1980s, its rate would have been slower than it was in the 1970s.

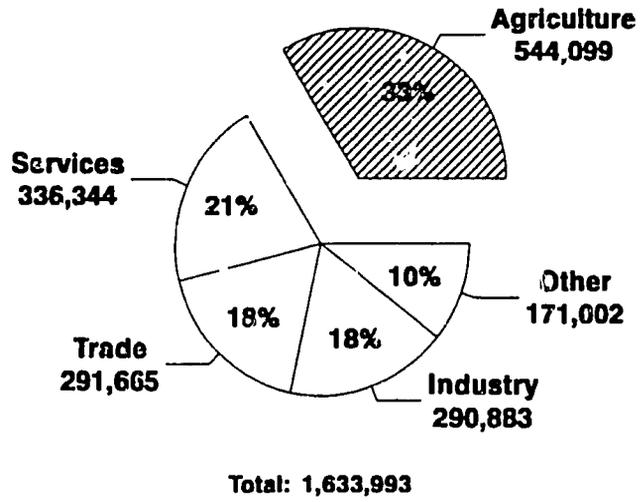
Not all economically active Salvadorans who work in the agricultural sector work the land. Of those included in the agricultural sector, some are professionals and technicians, others are administrators, and others work in transportation (see Table 1.1). Of those in the sector, 96.6 percent (523,368) actually work in agricultural tasks. Note that 1,145 individuals did not specify their occupations sufficiently, and so were excluded from further analysis.

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<sup>22</sup>The figures for the economically active population come from MIPLAN. Their numbers show a slightly larger number of individuals in the agricultural sector (638,293) than our analysis of these same data reveal. Since our raw data set includes only those who work in agriculture and not the entire population, we were unable to recheck the MIPLAN calculations. From here on in this report, we will be concerning ourselves exclusively with the agricultural population, and all calculations are based on our counts from the original data set rather than MIPLAN calculations.

<sup>23</sup>United Nations, *Statistical Yearbook for Latin America and the Caribbean*, op. cit., p. 42.

**Employed Economically Active Population of El Salvador, 16 and Older**



Source: MPHS, 1991-1992

Figure 1.2 Employed Economically Active Population of El Salvador, 16 and Older

**Table 1.1 Occupations in the Agricultural Sector: Employed Population, 16 and Older**

Occupation	Number	% of Total
Professionals	1,157	0.2
Directors	194	<0.1
Administrators	3,168	0.5
Sales	1,273	0.2
Service	5,808	1.0
Non-agricultural tasks	3,108	0.5
Artisans	1,646	0.3
Transportation	3,232	0.6
Agricultural tasks	523,368	96.6
Not sufficiently specified	1,145	0.2
<b>TOTAL</b>	<b>544,099</b>	<b>100.0</b>

### 1.1.3 Unemployed Agricultural Workers

The figures in Table 1.1, however, exclude many Salvadorans who are classified as being in the agricultural sector but who, at the time of the survey, were not employed. MIPLAN defines the employed population as those who worked during the week prior to the survey or who did not work but were regularly employed. The MIPLAN survey skirts the issue of underemployment by relying on the category of "temporary wage laborer." Among agricultural workers in El Salvador (and elsewhere) underemployment is a serious problem that should not be minimized, but in this study we follow the MIPLAN definitions that distinguish between unemployment and temporary employment. The remainder of the working age population is classified as unemployed, which includes those who are past retirement age (65 years of age) but who still attempt to find work, at least on occasion, and those who have not reached retirement age but are unemployed.<sup>24</sup> The latter group of individuals must not be ignored because they comprise an element of the population that presents policymakers with the serious

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<sup>24</sup>One case was encountered of an unemployed individual who is listed as having land (1-4 manzanas). We assume that this one case represents an error in interviewing or in coding.

challenge of finding employment for them. The employment data for the agricultural sector are presented in the following figure:

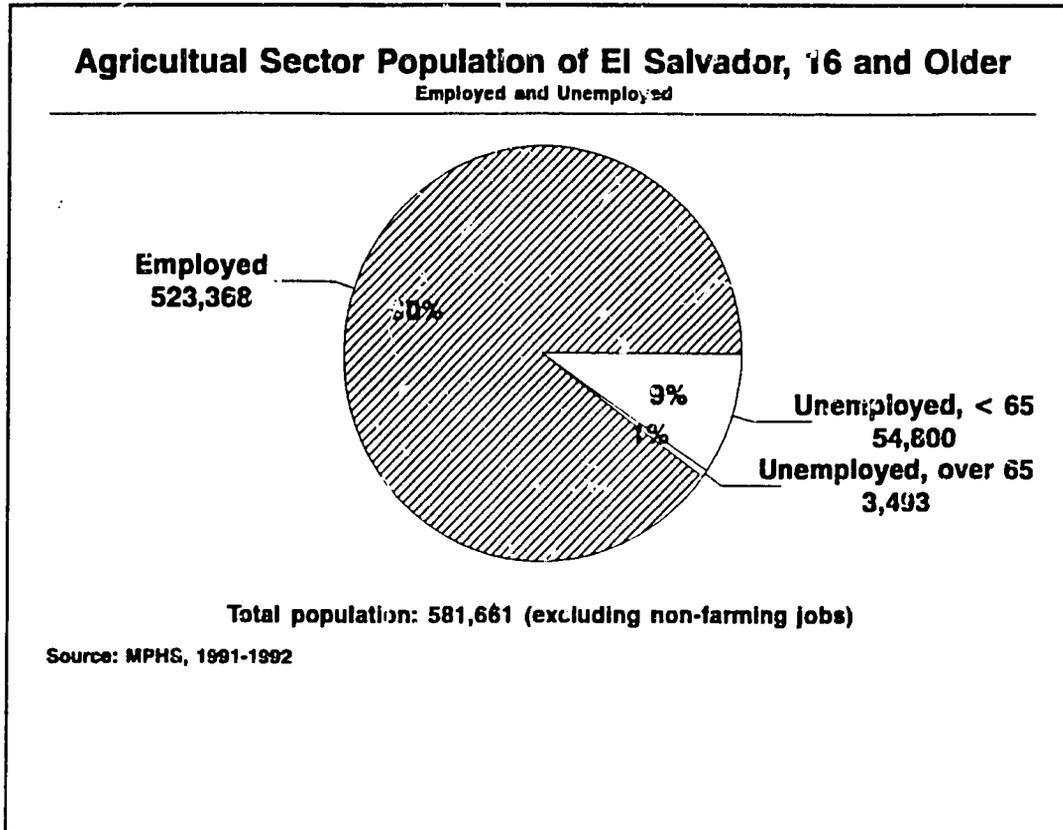


Figure 1.3 Agricultural Sector Population of El Salvador, 16 and Older

The size of the unemployed population over the age of 65 is quite small and does not materially affect the analysis. To avoid complicating the analysis, I include this small group in the calculations that follow (for more cautious estimates one could subtract 1% from those figures). This leaves us with 58,293 individuals to add to the count. In relative terms, they represent 10 percent of the agricultural sector labor force and need to be taken into consideration in any effort to estimate the landless and land-poor population of El Salvador.

#### 1.1.4 The Land-Poor Population

The problem of unemployment is only one of the serious challenges facing policymakers; among the employed population, only a minority have either steady jobs or sufficient farmland from which they can draw an income. To appreciate this reality, it is necessary to present a more complex picture of employment and unemployment in the agricultural sector of El Salvador by subdividing the employed population into its major components.

14

The landholding population is divided into the main land tenure categories in the figure below. The estimate is based upon land being worked by the farmer, not land owned.<sup>25</sup> According to the MPHS, 26 percent of all of those in the agricultural sector have access to land, of whom about 42 percent are landowners. An additional 5 percent are cooperative members. The survey uncovered only 10,040 agricultural sector individuals whose principal employment is that of cooperative member, when in fact the various PERA surveys show that there are

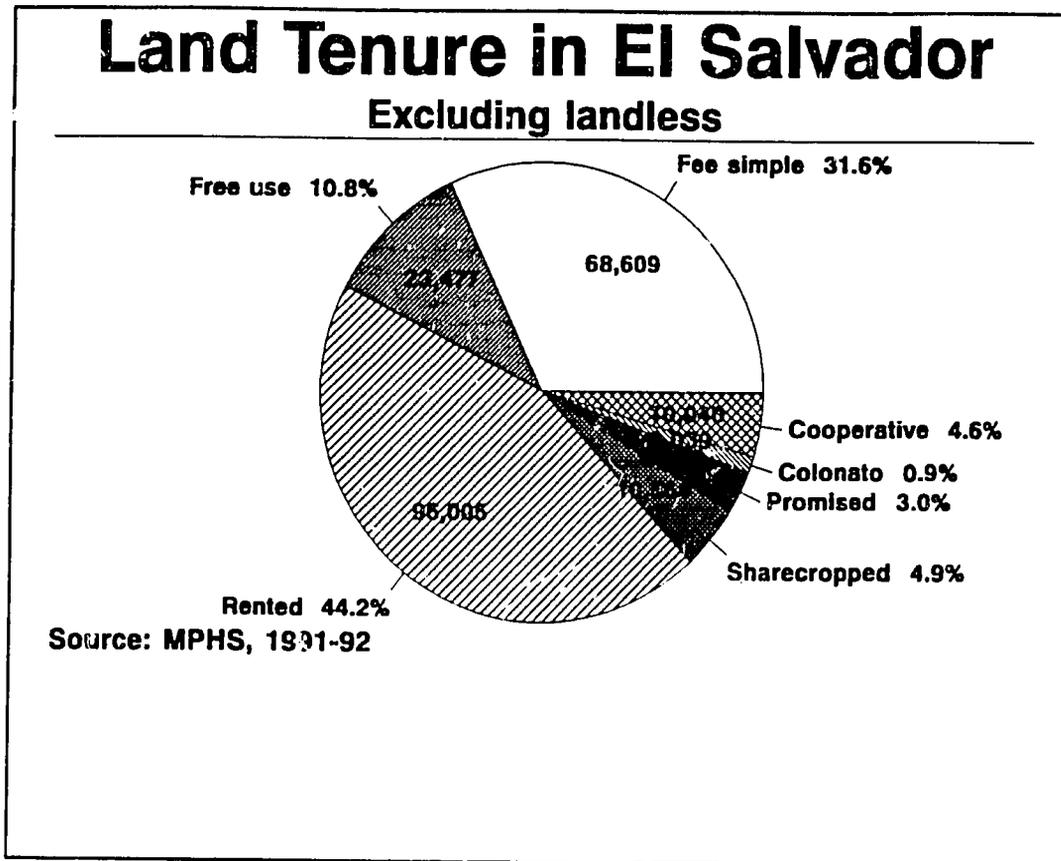


Figure 1.4 Land Tenure in El Salvador, excluding landless

<sup>25</sup>Although we also would have preferred to know how much land the farmer owns, that question was not asked in the MPHS. This means that in some cases, land is owned that is not worked and hence the landless/land-poor figures might be an overestimate of this category. At the same time, however, we feel that this distortion is minimal because of two reasons. First, land use in El Salvador is so intense that few farmers can afford to let any significant portion of their land remain idle. Second, if a farmer is not working a portion of land owned, it is likely that there are good reasons why that is the case, very likely because the land is either not arable or because it is being occupied by a building, road or other construction. For that reason, the category of "land worked" in a country such as El Salvador probably provides a very good estimate of the true landed/landless population.

15

approximately 30,000 members of the Phase I cooperatives.<sup>26</sup> The undercounting of this category resulted from sampling individuals who live in concentrated areas, but who represent only a tiny fraction of the overall population. In El Salvador, cooperative members total less than 2 percent of the economically active agricultural population. In a survey that is designed to represent the entire population of the country, concentrated specialized groups will be undercounted because it is highly unlikely that sufficient sampling points will fall within the limited areas in which the cooperatives are located

Figure 1.4 represents a total of 217,289 farmers with access to land in El Salvador, but this is an underestimate of the actual number of farmers. Recall that this study is based upon those who work in the agricultural sector and therefore excludes all of those whose *primary* occupation is in other sectors. This approach was taken because the concern is with the development of policy for the agricultural sector. An examination of the entire population of El Salvador, including all economic sectors, uncovers an additional 31,299 individuals who have access to land *as a secondary occupation*. Of those, approximately half (16,325) have access to less than 1 mz. of land. Hence, the true figure of the number of farms in El Salvador is much closer to 248,588 (217,289 in the agricultural sector plus 31,299 with a secondary occupation in agriculture).

Not all of those who have access to land have enough to sustain their families. In most writings on land tenure, such individuals are called "land-poor." The land-poor population is defined as those who work less than 1 mz. (0.7 hectares) of land. While working 0.7 hectares or more might seem like an unusually small amount of land for an individual to be classified as not being land poor, in El Salvador this is a reasonable criterion. There are two factors that serve as the basis for that decision. First, if it were raised any higher, the great majority of farmers in El Salvador would be classified as land poor. While that may indeed be the case in an international comparison with countries better endowed with land resources, calling almost all those in El Salvador land poor would not allow making distinctions that are quite relevant within the Salvadoran context. Second, as shown later in this report, farmers who own 1 mz. or more of land earn incomes that match or exceed those who have steady jobs in the industrial sector. As a result, it is inappropriate to use the term "poor" when in fact they earn more than other gainfully employed Salvadorans. The land poor total 85,361 farmers (see Figure 1.6 and Table 1.2), a number subtracted from the total farming population in order to develop the estimate of the landless, land poor, and unemployed population.

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<sup>26</sup>There are many more individuals in El Salvador who are members of cooperatives, including savings and loan cooperatives. MIPLAN's focus, however, was on distinguishing the nature of employment rather than the associations to which individuals belong. Cooperative members in this study, therefore, are distinguished from those who are farmers who own their own land, salaried workers, etc.

### 1.1.5 Unpaid Family Labor

Continuing the estimate of the landless, land poor, and unemployed, 11 percent of the adult agricultural sector labor force (62,008 individuals) are unpaid family laborers. Some might wish to include this group in the landless population because the land they work is not their own, but is owned instead by a parent or relative. Sooner or later, most of these family workers will either strike off on their own or inherit their parent's land. Half (54%) are between the ages of 16 and 20, and 73 percent are 25 or younger. In cases of noninheritance, the children will fully enter the landless category, in the latter case they will merely be replacing their landed parents, shortly to have children of their own who will be landless. As seen in Figure 1.5, at the moment of the interview, the great bulk of the unpaid family laborers were children of landowners, but significant proportions were already fully responsible adults with households. Indeed, by restricting the analysis to those 16 years of age and older, in effect the study eliminated all of the young children from consideration as part of the landless population.

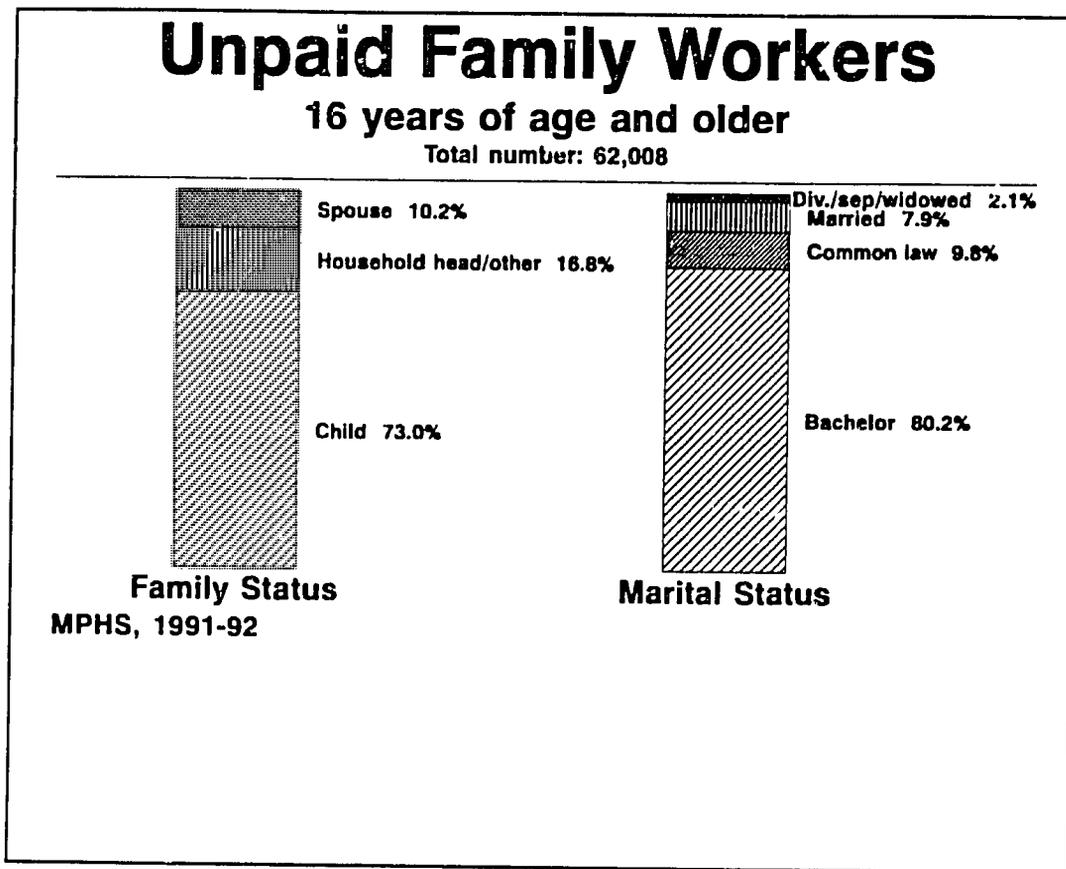


Figure 1.5 Unpaid Family Workers, 16 years of age and older

17

Nonetheless, because an unknown proportion of these unpaid family workers eventually will inherit their parents' land, I do not wish to inflate the population of landless. Recall, I am attempting to provide a conservative estimate of the size of the landless and land poor population. At the same time, it should be pointed out that given the relatively large number of children found within farming populations of El Salvador and the small size of the average farm, many of the children will either inherit tiny plots or no land at all.

The landless should be subdivided into two groups of laborers: permanent and temporary. By far the larger group, indeed the largest group of any of the seven into which the entire agricultural sector was divided (Figure 1.6) are the temporary day-laborers, comprising 29 percent of the entire sector (169,432). The next largest group is the unemployed, who make up 10 percent of the total (58,293). Hence, the unemployed and temporary workers comprise 39 percent of the entire agricultural sector labor force, or 227,725 individuals. The permanent day-laborers comprise a landless group whose income source is, nonetheless, more secure than the unemployed and temporary day-laborers. The permanent day-laborers comprise, however, a far smaller 14 percent (81,734).

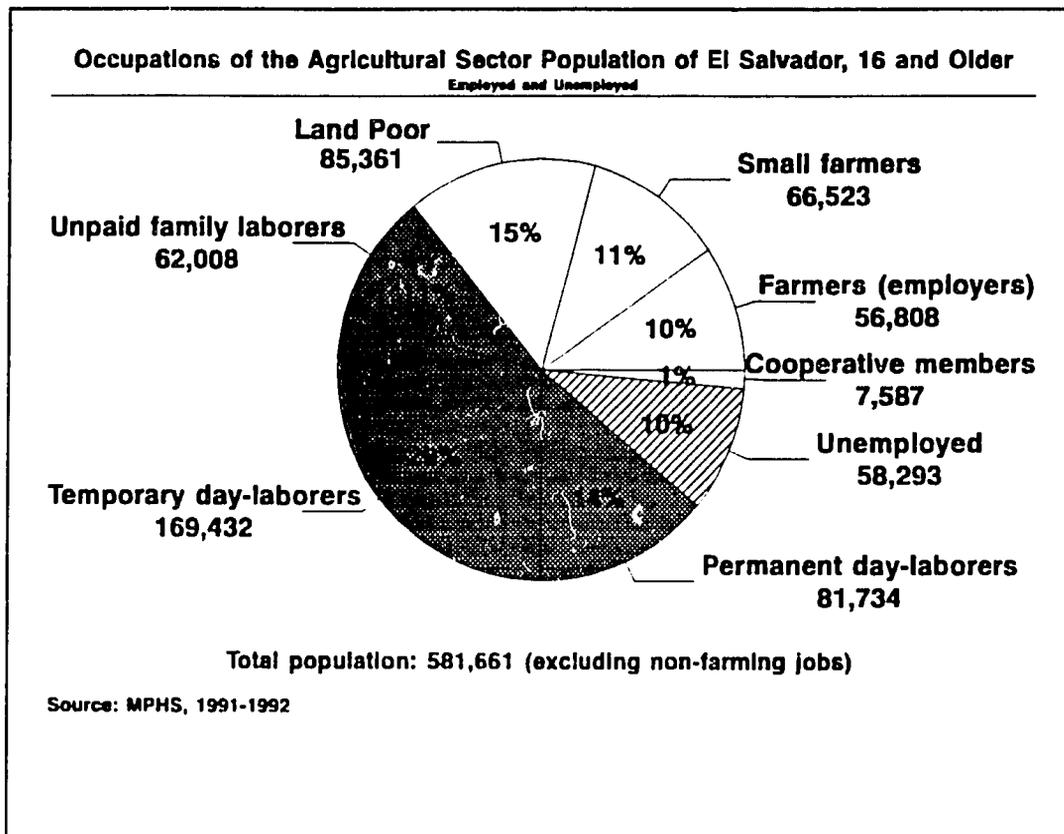


Figure 1.6 Occupations of the Agricultural Sector Population of El Salvador, 16 and Older

The data presented in Figure 1.6 should be reexamined because the categorization scheme forced a number of individuals into a single category, when in fact some individuals may really best fit into two. For example, although an individual may primarily earn his/her income from wage labor, he/she might also have some farmland. Table 1.2 examines the relationship between the size of land worked categories and land tenure. There are indeed numerous mixed categories. Some of the laborers, both temporary and permanent, also have access to land as a secondary occupation. These represent about 11 percent of the permanent day-laborers and about 8 percent of the temporary day-laborers. The great bulk of these workers who also have access to land have access to less than 1 mz., and therefore would be considered land poor by any definition.

Table 1.2 Employment and Land Tenure

	Categorization of Agricultural Work Force															
	Farmer (with employees)		Farmer		Land Poor		Unpaid family laborer		Coop member		Perm. wage-laborer		Temp. wage-laborer		Unemployed	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
Land worked (in manzanas)																
0.....	.0%	0	.0%	0	18.1%	15,476	99.5%	61,670	47.3%	3,590	89.2%	67,446	91.7%	155,408	99.9%	58,209
< .05.....	.0%	0	.0%	0	22.1%	18,890	.0%	0	3.1%	238	4.7%	3,536	3.3%	5,648	.0%	0
.5-1.....	.0%	0	.0%	0	59.7%	50,995	.1%	68	22.6%	1,712	6.2%	4,667	4.9%	8,376	.0%	0
1-4.....	85.3%	48,485	97.5%	64,867	.0%	0	.4%	270	27.0%	2,047	.0%	0	.0%	0	.1%	84
5-9.....	8.4%	4,746	2.3%	1,506	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0
10-19.....	3.3%	1,865	.1%	41	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0
20-49.....	2.0%	1,142	.2%	109	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0
50+.....	1.0%	570	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0	.0%	0
TOTAL.....	100.0%	56,808	100.0%	66,523	100.0%	85,361	100.0%	62,008	100.0%	7,587	100.0%	75,649	100.0%	165,432	100.0%	58,293

Note: The first three categories in this table, "farmer with employees," "small farmers," and "land poor" include all forms of land tenure arrangements, including renting, sharecropping, etc. The categorization for the columns, therefore, is not tenure-based but is occupation-based.

### 1.1.6 Overall Estimate of Landless, Land poor, and Unemployed

Taking into consideration all of the above, it is possible to derive some reasonably good estimates of the magnitude of the landless, land poor, and unemployed agricultural population of El Salvador. The calculations are summarized in Table 1.3. Note that these are the most conservative estimates of the size of this population because they completely exclude the unpaid family labor from the pool and also because they only consider those with *less than 1 mz.* of land to be land poor.

**Table 1.3 Derivation of Landless, Land Poor, and Unemployed in the Agricultural Sector in El Salvador (1991-92)**

Categories	Numbers	Comments
Total Population, 1991	5,166,200	
of whom, those 16 and older...	2,918,746	
of whom, those economically active...	1,633,993	
of whom, those who are employed in the agricultural sector...	544,099	
of whom, those who are employed and hold agricultural jobs...	523,368	
of whom, those who are landless temporary day laborers...	169,432	Note that 4,730 workers own 1 to 4 mz. of land and are therefore excluded as landless
to which is added the unemployed agricultural workers...	58,209	
yielding a total of landless and unemployed...	227,641	
to which is added the land-poor small farmers...	85,361	Note that this includes those who report no land as well as those with less than 1 mz. of land
yielding a total of landless land poor and unemployed in the agricultural sector of....	313,002	
which, when increased by the 8.2% undercounting of the sample yields...	338,668	
which in relative terms, the percent of landless, land poor and unemployed within the agricultural work force is...	54%	The denominator for this calculation is produced by adding the 523,368 individuals in the agricultural sector with jobs in agricultural occupations plus the 58,209 unemployed (581,661)

The calculation in Table 1.3 shows that there are 338,668 landless, land poor, and unemployed agricultural workers in El Salvador, representing 54 percent of the agricultural work force (employed or unemployed) over the age of 15. In other terms, 46 percent of the Salvadoran farm population either has a steady wage labor job or works more than 0.7 hectares of land. Further, it must be remembered that the estimate of landless and land poor is extremely conservative; I have set the lower limit of land worked at a minuscule 0.7 hectares and have excluded all of the unpaid family workers from the count. If any of these family workers are individuals who will not, eventually, inherit their parents' land, then the actual number of landless and land poor could well exceed a half million. Finally, all of the cooperative members are counted as landowners even though in many cases they are not. The overall picture is presented in Figure 1.7, where it can be seen that 10 percent of the agricultural labor force is unemployed, and of the employed work force, 32 percent are landless wage workers and 16 percent are land poor.

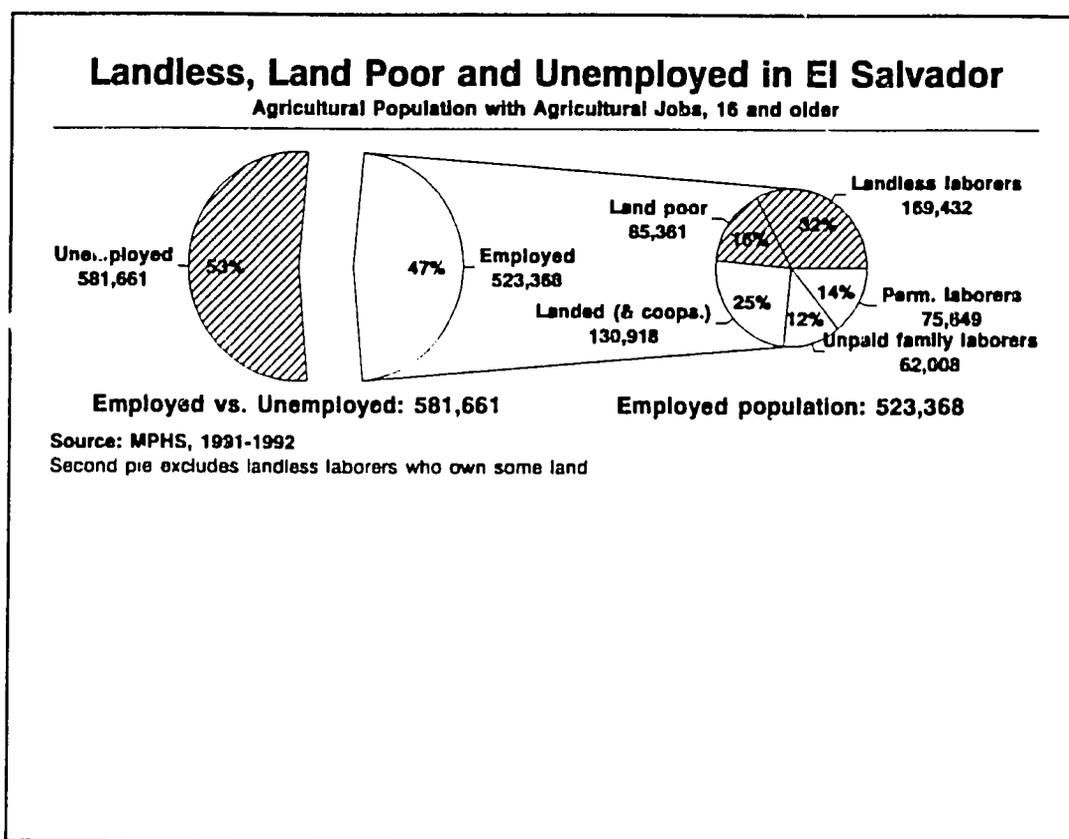


Figure 1.7 Landless, Land Poor and Unemployed in El Salvador, Agricultural Population with Agricultural Jobs, 16 and Older

22

### 1.1.7 Comparison of Results with Other Studies

How does this estimate compare with prior studies? It is only possible to compare with studies that have attempted to measure the landed population. The most comprehensive is the PERA survey of June 1988, but the figures reported in various sections of the PERA study vary considerably. Many of the tables in the January 1989 volume<sup>27</sup> report a total of 227,492 farms in the non-reformed sector.<sup>28</sup> The PERA study states that these totals exclude rented farms of less than 2 mz. and land that has been acquired less than five years prior to the interview in 1988. When those 40,233 farms are added back in, the PERA results climb to 286,183.<sup>29</sup> However, the total of non-reformed farms plus the rented farms smaller than 2 mz. plus land that had been acquired less than five years prior to the interview does not total 286,183 as stated by PERA, but 267,725, a difference of 18,454 farms. It is unclear why these differences appear in the PERA tables. One suspects that they were attempting to add in the reformed sector farms, but that is not clear. Various studies that have used the PERA data have, nonetheless, used without comment, the 286,183 figure.<sup>30</sup>

The McReynolds study, which relies in part on the PERA survey and attempts to cover the reformed sector as well, finds 317,531 producers.<sup>31</sup> Unfortunately, because the McReynolds study uses a composite of five data sets, it is not at all clear if the researchers were able to eliminate overlap among these studies. The multipurpose survey totals from Figure 1.7 (including the landed and cooperatives) and land poor was 209,472. It would appear from these totals that the MPHS underestimates the landed population by some 80,000 farms when compared with the PERA report. The PERA study, however, does not exclude, as I have in the above figure, the landless laborers and family laborers who nonetheless own some land. As shown in Table 1.2 above, there are 14,353 individuals in that category. If I add those to the 208,692 figure given above, the MPHS produces a total of 223,045 farmers.

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<sup>27</sup>Ministerio de Agricultura y Ganadería, Oficina Sectorial de Planificación Agropecuaria, Proyecto Planificación y Evaluación de la Reforma Agraria, Doc. 1/01/89, "Estudio nacional del sector agropecuario, Encuesta sobre uso y tenencia de la tierra, Vol. II, Cuadros de resultados," San Salvador, enero, 1989.

<sup>28</sup>The McReynolds study used slightly different weights to expand the sample and came up with a total of 230,266 farms. See their Appendix B, pp. 19-20.

<sup>29</sup>See PERA, Vol. I, "Análisis de resultados," enero, 1989, p. 6 and p.8, and Vol II, Cuadro 5 (pages are not numbered).

<sup>30</sup>Aquiles Montoya, *El Agro Salvadoreño antes y después de la reforma agraria*. San Salvador: CENITEC, Cuadernos de Investigación, Año II, junio de 1991, p. 52.

<sup>31</sup>Samuel McReynolds, et al., "The 1989 El Salvador Agricultural Land Use and Land Tenure Study," November, 1989, p. 14. It should be noted that a critical section of that report, pages 17-32, are missing from the copies of the report found within the AID mission in El Salvador. Thus far it has not been possible to obtain the missing pages.

Also excluded thus far in the analysis presented here are those individuals who have a primary occupation in a field other than agriculture but who nonetheless work land as a secondary occupation. These individuals total 31,299 in the MPHS. Some of the land possessed by these individuals is rented out and therefore would be included in the tables presented thus far in this report. If this land follows the national pattern, the best estimate is that about half of this land possessed by those with secondary occupations in agriculture is being rented out. Hence, an additional 15,000 farms should be added, raising the total to 238,045. Because the focus of the present study is on those who derive their living from agriculture, this group is not included in the remaining sections of this report. The methodology used by PERA, however, and, more important, by the census, would include this group of individuals, and therefore for comparative purposes I have included this group in this section.

To derive the final estimate of the landed population in El Salvador, it is necessary to increase the above estimate to include the 8.2 percent of the population excluded in the sample. When this is done the total number of farms is 257,564, compared with 267,725 in the (corrected) PERA study. This would mean that the 1991-92 MPHS comes very close to the estimate of the number of farms that were noted in the PERA survey, but a lower percentage than the McReynolds composite estimate of 317,531. A portion of this difference may be accounted for by the confidence intervals of the two surveys. The PERA sample of 2,694 is far smaller than the MPHS and therefore has a wider confidence interval. Assuming simple random sampling, the PERA survey had a confidence interval of about 2 percent, meaning that the "true" PERA result could have been as low as about 262,000 and the MPHS could have produced a "true" result as high as 262,000, results that are virtually identical. Yet, it should be pointed out that several factors might influence the results and cause them to vary from the "true" figure. Both studies may have over or undercounted the population, especially given the context of conducting field research during a war. But, the similarity of results of the two surveys, each drawn using an entirely different sample frame, gives increased confidence that the results presented in this paper based on the MPHS are reasonably accurate.

### 1.1.8 Indirect Tenancy

Before moving on to describe the landless population, it is important to take note of a key characteristic of the landed population. Not all of the landed farmers own their own land. Indeed, as shown in the first two columns of Table 1.4, of the two groups of the landed agricultural population (farmers with employees and farmers) totalling 123,331, only 44,439 (36%) own their land. An additional 9,820 (8%) work land granted to them without payment (*gratuita*). The largest single category of landed farmers in El Salvador, however, are renters, which includes 52,351 farmers (42% of all farmers). Summing all renters for all categories of the agricultural work force, the total is 96,005 renters, compared with 68,609 of fee simple

Table 1.4 Agricultural Work Force and Land Tenure

Categorization of Agricultural Work Force																
Farmer (with employees)		Farmer		Land poor		Unpaid family laborer		Coop member		Perm. wage-laborer		Temp. wage-laborer		Unemployed		
%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	
<u>Land Tenure</u>																
Fee simple...	43.0%	24,411	30.1%	20,028	24.4%	20,797	.0%	0	.0%	0	1.4%	1,049	1.4%	2,324	.0%	0
Free use.....	6.4%	3,629	9.3%	6,191	9.1%	7,746	.0%	0	9.5%	717	3.2%	2,439	1.6%	2,755	.0%	0
Rented.....	36.5%	20,710	47.6%	31,641	39.2%	33,431	.2%	118	5.6%	425	3.5%	2,638	4.1%	6,958	.1%	84
Promised.....	5.4%	3,072	3.4%	2,245	.9%	798	.1%	84	.7%	50	.2%	153	.1%	153	.0%	0
Colonato.....	.2%	91	.6%	427	.5%	424	.0%	0	2.0%	153	.4%	321	.4%	623	.0%	0
Cooperative..	2.6%	1,461	3.4%	2,239	2.3%	1,933	.0%	0	34.3%	2,602	1.8%	1,331	.3%	474	.0%	0
Sharecropped.	4.7%	2,646	4.5%	2,991	4.5%	3,868	.1%	68	.7%	50	.4%	272	.4%	669	.0%	0
No land.....	1.4%	788	1.1%	761	19.2%	16,364	99.6%	61,738	47.3%	3,590	89.2%	67,446	91.8%	155,476	99.9%	58,209
TOTAL.....	100.0%	56,808	100.0%	66,523	100.0%	85,361	100.0%	62,008	100.0%	7,587	100.0%	75,649	100.0%	169,432	100.0%	58,293
Total for table: 581,661																

tenancy and 23,477 of free use.<sup>32</sup> In addition, there are a total of 10,564 sharecroppers.<sup>33</sup> The total of renters and sharecroppers is 106,569. Hence, whether one looks at landowners alone, or at all categories of the labor force including the land poor, wage labor, and so on, renting and sharecropping are the predominant form of land tenure in El Salvador. Only among the farmers who employ workers on their land is there a (slightly) higher prevalence of fee simple tenure over rented tenure.<sup>34</sup> The "colonato" system fell into disuse in the 1960s, but some older farmers still consider themselves to be "colonos" or debt peons.

Renting and sharecropping in El Salvador have been historically far more common than in other countries of the region, but it is not entirely clear why. Speculation is that renting was not common up through the liberal reforms of the 1880s, which outlawed communal forms of land ownership. The reforms were designed to free more land for coffee cultivation and other forms of agrarian capitalism. These reforms resulted in the rapid and massive loss of land controlled by the indigenous community. The "colonato" system came into wide use as Indians, now forced off their lands, became debt peons on landed estates. The colonos were granted usufruct rights to small plots. The colonato system was a way of guaranteeing landlords a steady labor supply while at the same time reducing their wage labor costs.<sup>35</sup> When the colonato system fell into disuse and was eventually outlawed in 1980 (as it was in the rest of Latin America), renting arrangements were substituted for the old system.

Strong evidence that supports the conclusion that renting and sharecropping served as a functional surrogate for the colonato system emerges from an examination of the agricultural

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<sup>32</sup>Here we are summing across the "rented" row in the table, to include farmers, land poor, wage laborers, etc.

<sup>33</sup>The MPHS identifies sharecroppers as the category "censo." Common terminology, however, is "aparcerero." We suspect that many of the renters in fact are sharecroppers, but because of the unusual terminology used in the survey, many sharecroppers were probably misclassified as renters. As a practical matter, the difference between these two groups is minimal, with renters paying for their usufructuary rights in cash, and the sharecropper paying in kind (i.e., a portion of the crop). Research in Costa Rica has shown that renting is a somewhat more highly regarded arrangement according to peasant perceptions. See Mitchell A. Seligson, *Peasants of Costa Rica and the Development of Agrarian Capitalism*, Madison: University of Wisconsin Press, 1980. It should be noted, however, that in a comment made by John Strasma he argues that the difference between the two systems is the time at which the rent is actually paid. According to Strasma, renters pay for the use of the land "up front," whereas sharecroppers (*aparcereros*) pay at the time of the harvest.

<sup>34</sup>It is of note that the number of workers who have land in some form of cooperative arrangement exceeds the number of workers who are categorized as cooperative members.

<sup>35</sup>The colono system was regulated by the Agrarian Law of 1942. Article 205 of that law specifies several obligations of the owner, including provision of formal contract terms, the provision of suitable and clean housing, food and medicine, as well as allowing the colono to seek work on other farms.

census data from the period 1950-1971. Because there was no census prior to 1950, it is impossible to examine the growth of the colonato system in prior decades.

In 1950 the census reported a total of 174,204 farms, of which there were 32,945 renters (19%), and 33,384 colonos (19%).<sup>36</sup> Thus colonos and renters represented in 1950 38 percent of all farms. By 1961, the number of renters had increased to 43,457, out of a total of 226,896 farms, still 19 percent of the total<sup>37</sup> and colonos had increased to 55,769, or 25 percent of the total farms thus indirect tenancy had increased to 44 percent of all farms. In the 1961 census a combined category of renting plus ownership was introduced ("propietario-arrendatario simple") that totaled an additional 29,805. If all of these are added to renters, then renting would have increased to 32 percent of all farms.

The major change appears in 1971, when the census reported 270,868 farms, out of which only 17,018 (6%) were worked by colonos. This sharp decline is attributed by the census bureau to the 1962 minimum wage law, which made the landlords of colonos shift to a cash-based renting system.<sup>38</sup> Renters increased to 76,256, plus an additional 4,408 which were rented with a promise of sale plus a mixed category of renting combined with free use. In total, these renters comprise 88,495 (33%) of the total number of farms. If the colonos are added to this total, indirect tenancy totaled 38 percent in 1971. It would appear that indirect tenancy is a fundamental mechanism of land tenure in El Salvador; changing the legal structure merely seems to alter the terminology under which land is held indirectly, does not eliminate or even reduce the amount.

The number of renters uncovered in the MPHS may appear surprisingly high to some observers in light of the reforms initiated under Phase III (Decree No. 207) of the 1980 land reform, as well as the laws passed prior to that reform. On March 23, 1972, a Provisional Rental Law (Decree No. 509) was passed that froze rental rates at the level of the agricultural year 1971-72 (article 7) and gave the tenant, not the landlord, the option to renew the lease. The law was renewed in 1973 and again in 1974. In March 1975 two new, more comprehensive laws (Decrees No. 27 and 29) were passed that fixed the maximum amount of rent that could

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<sup>36</sup>A frequently cited study by CEPAL, *Tenencia de la tierra y desarrollo rural en Centroamerica*. San José, Costa Rica: EDUCA, 1973 and 1980 give figures that would lead to the conclusion that 14 percent of the farms in 1950 were rented. The correct census data is contained in Ministerio de Economía, Dirección General de Estadística y Censos, *Primer censo agropecuario, octubre-noviembre-diciembre de 1950*. San Salvador, 1954.

<sup>37</sup> Ministerio de Economía, Dirección General de Estadística y Censos, *Segundo censo agropecuario, 1961*. San Salvador, 1967.

<sup>38</sup> Ministerio de Economía, Dirección General de Estadística y Censos, *Tercer censo nacional agropecuario, 1971*, San Salvador, 1954, p. XXII.

be charged for each of several types of crops.<sup>39</sup> The law went further and gave priority in the renting of land to groups of farmers and cooperatives. On April 4, 1979, yet another, and more comprehensive, renting law was passed (Decree No. 157).

The Phase III reform of 1980 went much further than the 1979 law. It was based on the principle that land must fulfill its social function, and that "private agricultural land holdings are complying with their inherent social function whenever they are directly exploited by their owners." Phase III decreed the immediate expropriation, upon request of the tenant, of lands that at the time of issuance of the decree were being leased, rented, sharecropped, and so on. The expropriated land was assigned to ISTA,<sup>40</sup> which in turn was to have sold it (with a 30-year mortgage) to the former renters and sharecroppers. Under the terms of this law, approximately 52,000 former renters became property owners.

Many people believe that Phase III virtually eliminated indirect tenancy in El Salvador, but this is not the case. The 1971 agricultural census found 162,584 rented properties (60%) out of a total of 270,868 farms.<sup>41</sup> It is impossible to say with any certitude how many rented farms there were in 1980. In a 1977 USAID study, it was estimated that approximately 50 percent of all farms in El Salvador were rented, which, if based on the 1971 agricultural census, would have meant some 135,000 farms.<sup>42</sup> The Oxfam impact audit cites a figure of 150,000.<sup>43</sup> A 1980 national survey conducted by the Ministry of Planning was used by USAID in 1983 to develop an estimate of 87,000 potential beneficiaries, but of those, some 20,000 were renting land on estates that had been expropriated under Phase I (Decree No. 153) of the agrarian reform, lowering the estimate to 67,000 potential beneficiaries. To refine that estimate, PERA conducted a survey of 2,060 households, which determined that there were a total of 117,330 potential beneficiaries, of whom 25,992 had already received land granted by FINATA.<sup>44</sup> Whatever the actual total, the implementation plan for Decree No. 207 set a target

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<sup>39</sup>See Donald Ralph Jackson, *The Communal Cooperative Experience: An Example from El Salvador*, Ph.D. dissertation, University of Wisconsin, 1980, pp. 184-86.

<sup>40</sup>These lands were later reassigned to FINATA.

<sup>41</sup>Of those, approximately 272 farms were larger than 500 hectares. There were approximately 1,830 properties larger than 100 hectares. Decree 207, Article 2, provided that rented farms larger than 100 hectares were to be expropriated under the terms of the Phase I law and held as a single unit by ISTA.

<sup>42</sup>Samuel Daines and Dwight Steen, *Agricultural Sector Assessment: El Salvador*, USAID/El Salvador (Washington, D. C.: Daines and Steen Consulting Firm, 1977), p., 10, as cited in Simon and Stephens, Jr., 1982, p. 19 and note 28.

<sup>43</sup>Martin Diskin, supplement to Oxfam Impact Audit, 1982, p. 32.

<sup>44</sup>Memorandum from Martin V. Dagata to Ambassador Deane R. Hinton, "Survey to Estimate Decree 207 Beneficiary Population," February 17, 1983.

of granting definitive titles between 1981 and 1985.<sup>45</sup> Michael Wise accepts the estimate that there were approximately 117,000 potential beneficiaries of Phase III, of whom 52,000 received ownership rights.<sup>46</sup> The McReynolds study, cited earlier, was working with a 1985 study that yielded a higher estimate of farms affected, totalling 63,631.<sup>47</sup> PERA reports show 22,000 farms affected in 1981-82, 50,424 in 1982-83, and 63,611 in 1983-84. A handful of farms were added the following year, but the totals began to drop in 1985-86 and remained around 46,000 in the years that followed.<sup>48</sup> My own examination of the 1993 FINATA computerized records uncovered a list of 33,393 beneficiaries. This lower number may be accounted for by the fact that under the law an individual could have applied for more than one parcel, provided that the combined transfers to any one individual did not exceed 17 acres.<sup>49</sup> As a result, the higher estimates may reflect many applicants for multiple Phase III parcels. There is also some variation in the way the beneficiaries are counted. Some count the total number of requests, others count the number of provisional titles granted, and still others count the number of definitive titles issued.

If the 1980 decree had been left in place, presumably no new renting would have occurred. Subtracting McReynolds' high estimate of farms affected in Phase III (63,631) from the low estimate of the total number of rented farms given by Wise (117,000) would leave some 65,000 renters and sharecroppers, a number considerably smaller than the 106,569 encountered in the MPHS. But Phase III was not left in place. On May 18, 1982, the Constituent Assembly (Decree No. 6) restored the legality of renting land for agricultural purposes. Hence, it is not surprising that the MPHS, uncovered a substantial number of renters in El Salvador.

It is important to note at this juncture that these findings vary dramatically from the McReynolds report, which found that "by 1988, the number of renters had dropped by 80%

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<sup>45</sup>As quoted in Laurence Simon and James C. Stephens, Jr., El Salvador Land Reform, 1980-1981: Impact Audit. Boston: Oxfam America, 1982, p. 33, citing "FINATA, Plan de implementación de Decreto 207, marzo, 1981.

<sup>46</sup>Michael L. Wise, "Agrarian Reform in El Salvador: Process and Progress," USAID/El Salvador, September, 1986, p. 53, typescript.

<sup>47</sup>The McReynolds study incorporates (as Appendix D) a document entitled, "A Second Profile of Beneficiaries of Decree 207: Applied Methodology," San Salvador, July, 1985. That document (p.1) uses the 63,631 figure, citing "Reportes Gerenciales, Informe Global de Producción Acumulada por departamento, 28/11/84." Presumably that is a FINATA report; the Wise study uses later and more refined data.

<sup>48</sup>Data reported in Ricardo Cruz Letona, William Pleitez and Hermán Rosa, "Política económica y pobreza rural en El Salvador," *Política Económica*, Vol I, No. 5, Feb-March, 1991, CENITEC, p. 8.

<sup>49</sup>It is this factor which is argued in the February, 1983 Dagata memorandum cited above which is responsible for differences between early FINATA estimates and the PERA survey results of that time.

since 1971,<sup>50</sup> and which has served as the basis for the belief that the problem of indirect tenancy had largely been resolved by the Phase III land reform. That study showed that renting had declined from 60 percent of farms in 1971 to only 14 percent of farms in 1987. In absolute terms, the McReynolds study found 39,998 rented and sharecropped properties, whereas the MPHS survey found 106,000. Although this represents many more rental properties than McReynolds reports, it is fewer, in absolute terms, than the number of renters detected in the 1971 census, which found 162,854 rental properties. At the same time, it should also be noted that the MPHS found approximately 235,000 farms (in any form of tenancy, expanded by the undersampled 8.2 percent) compared with 317,531 in the McReynolds report<sup>51</sup> and 270,868 in the 1971 census. This may be an indication of a true reduction in the number of farms, or may be a function of the differences in the methodologies of the different data sources. It would appear, however, that the dramatic difference in the proportion of renters uncovered by McReynolds, when compared with the 1971 census, may have been an error. It should be kept in mind that the McReynolds study was based on a sample of fewer than 3,000 farms and utilized the cadastral information as the sample frame. It is possible, indeed likely, that the cadastral data base contains a systematic bias in underreporting rented properties. Officials in the cadastre have stated that large areas of rural El Salvador have not been updated since the late 1970s when hostilities began. In addition, the cadastre excludes 18 percent of the national territory that had not been completed when hostilities broke out in 1980. Moreover, the MPHS, with a sample four times the size that of the McReynolds study, has a greater probability, all other things being equal, of greater accuracy.

But the major factor influencing the estimate of renting in the McReynolds report was the exclusion from their 1988 PERA data base of renters with less than 2 mz. To remedy this exclusion, Peter Gore (in 1989) conducted a study of 272 landowners from the 1988 study who reported renting or conceding the use of a parcel smaller than 1.4 hectares. They were able to reinterview 135 of those individuals and found that they were renting to 1,256 farmers. Those farmers were in turn interviewed, and it was found that, on average, they were renting 0.66 hectares. The Gore report was not able, however, to determine how large a proportion of all farmers this group comprised. Instead, it was stated that the small renters "could have comprised as many as *a quarter of all agricultural producers* in the country" (italics in original), but provide no basis for that conclusion.<sup>52</sup> In short, the estimates of renters from the McReynolds study does not provide a solid basis for comparison with the present findings.

There is one other source of data that increases confidence in the estimates given here of renting and sharecropping. As a component of this investigation, Daniel Carr & Associates, Inc., conducted a study in May 1993, of approximately 1,200 farmers in El Salvador. The study covered each of the major regions of the country. In that sample, 49 percent of the respondents

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<sup>50</sup>McReynolds, et al., 1989, p. i.

<sup>51</sup>McReynolds, et al., November, 1989, p. 14

<sup>52</sup>"Appendices B and C: Sampling Methodologies," p. 22, of the McReynolds report cited above.

in the national cross-section component of the sample (N=750) were renting or sharecropping the land that they were farming.

## 1.2 The Landless, Land Poor, and Unemployed Farmers of El Salvador: A Description

### 1.2.1 Sex, Residence, and Land Tenure

Who are these one-third of a million landless, land poor, and unemployed Salvadorans? For the most part they are rural males (Figure 1.8).<sup>53</sup> About four-fifths are males and 83 percent live in rural areas. It might be surprising to find that nearly 15 percent of the landless live in cities, and that might lead one to question the veracity of the data. It is, however, a popular misconception that all agricultural workers live in rural areas. In many cases these are individuals who live on the fringes of urban areas and travel only short distances to obtain work in the surrounding countryside. One only needs to take a short automobile trip outside of San Salvador to see farms in full operation. The rapid urban migration in El Salvador has also led to families being divided in their employment, with some obtaining urban service sector jobs while others, often the older members of the family, continue to work in familiar agricultural jobs in the countryside.

How do the landless and land poor compare with the other sectors of the agricultural labor force? In Figure 1.9 is displayed each of the groups, including the temporary wage-laborers and unemployed, who comprise the landless population of El Salvador, as well as the land-poor group. I have grouped the three landless types at the extreme right of each bar chart so they can be easily contrasted with the landed types. There is little variation among the categories, but temporary wage-workers and unemployed agricultural workers are more likely to be females than are those of any other category. The difference is statistically significant.<sup>54</sup> This finding has implications for programs that target rural female populations.

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<sup>53</sup>The finding that the preponderance of the respondents were males rather than females is not a function of the survey methodology because this survey did not rely upon a "head of household" sample frame. Rather, it reflects the greater level of economic activity (as defined by MIPLAN) among the male population of El Salvador.

<sup>54</sup>We use an ANOVA design with a Duncan post hoc test to determine the statistical significance. Differences in the significance test of .05 or smaller are considered significant.

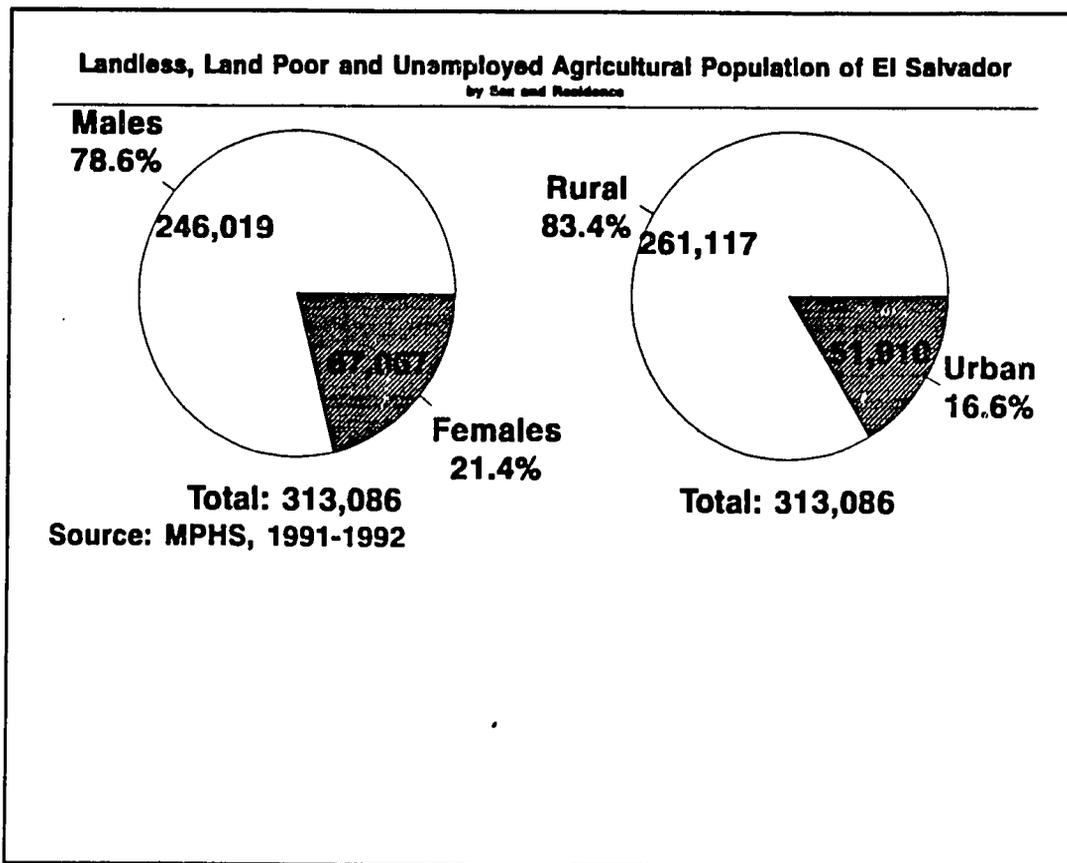


Figure 1.8 Landless, Land Poor and Unemployed Agricultural Population of El Salvador, by Sex and Residence

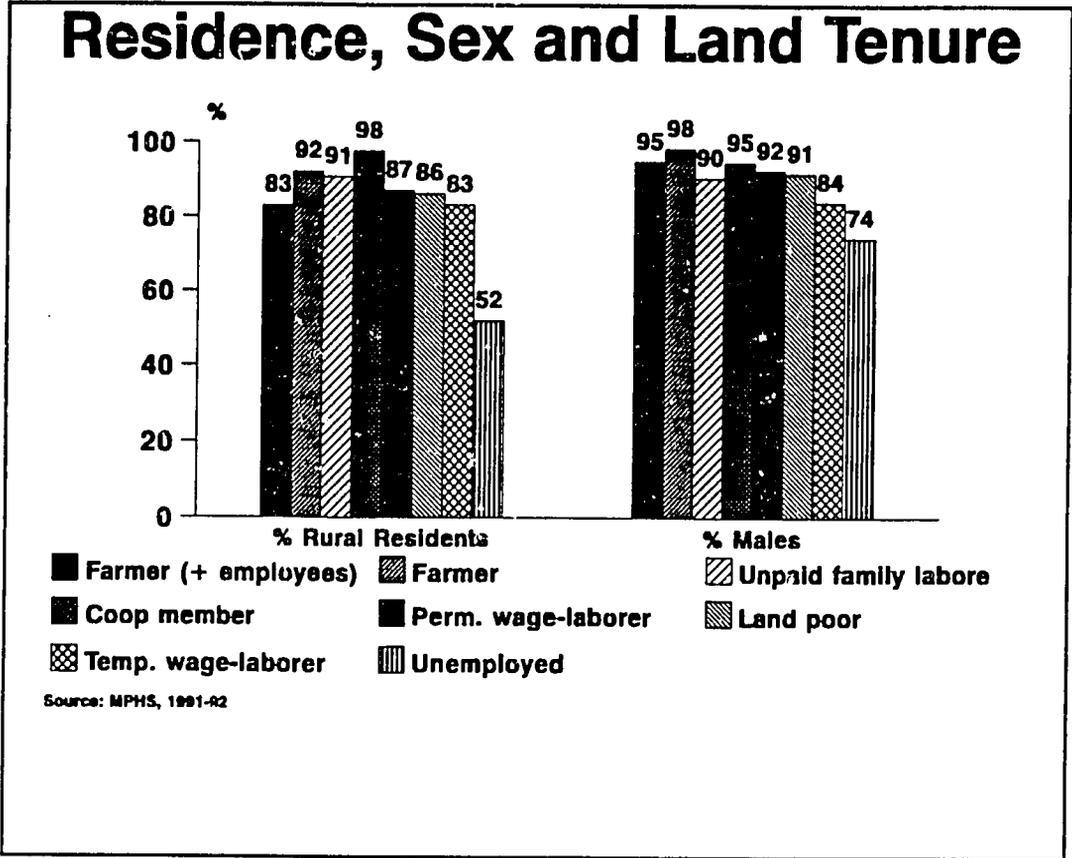


Figure 1.9 Residence, Sex and Land Tenure

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## 1.2.2 Geographic Location

It is possible to be more specific about the location of the landless and land poor versus the other land tenure categories in the sample. Table 1.5 shows how they are distributed among the five major geographic regions of El Salvador. Very few Salvadorans in the agricultural sector live within the metropolitan San Salvador area. The landowners, including the land poor, are quite evenly distributed among the remaining regions, with a somewhat higher concentration of farmers with and without employees located in the Occidental (i.e., western) region. The situation is quite different among the farm workers; both permanent and temporary workers are heavily concentrated in the western region. No doubt this is a function of the extensive presence of coffee farms in this region and their concomitant demand for labor.

It is also possible to provide an even finer breakdown of the location of the various land tenure types in El Salvador by examining their distribution by department, the main political subdivision in the country. Table 1.6 shows this division for El Salvador's 14 departments. It should be noted that part of this distribution is influenced by the sample design, which excluded, as was noted in the introduction of this report, a group of municipalities where it was considered too dangerous to conduct a survey. As a result, Chalatenango, for example, which has a smaller proportion of the agricultural work force in the MPHS, is affected by the fact that based on the 1971 population census, 28.8 percent of its population was excluded from the sample. However, CELADE and MIPLAN projections showed Chalatenango losing 3.8 percent of its population between 1971 and 1992, so the understatement of the agricultural work force may be somewhat attenuated if, in fact, the 1992 population census confirms this projected decline in population. Significant distortions are produced in Morazán (37.0%), Cuscatlán (28.8%), and La Unión (20.7%). The underrepresentation of the other departments that had "missing" municipios in the survey was not as great (Usulután, 12.2%; San Miguel, 11.2%; Cabañas, 3.1%). It is important to keep these distortions in mind because they do result in underrepresentation of some areas and, concomitantly, overrepresentation of others.

An examination of the distribution of respondents (Table 1.6) shows that the single largest concentration of unemployed is in the Santa Ana area. Ahuachapán, Sonsonate, and La Libertad are departments in which wage laborers are concentrated. The farmers are most concentrated in Ahuachapán and Santa Ana.

Table 1.5 Land Tenure and Geographic Region

Region	Categorization of Agricultural Work Force															
	Farmer (with employees)		Farmer		Land poor		Unpaid family laborer		Coop member		Perm. wage-laborer		Temp. wage-laborer		Unemployed	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
Occidental...	32.1%	18,239	31.2%	20,769	21.8%	18,584	36.4%	22,581	31.0%	2,352	50.5%	38,182	42.3%	71,605	31.5%	18,358
I-Central....	21.1%	11,965	22.8%	15,166	25.6%	21,860	19.8%	12,307	33.3%	2,525	21.0%	15,698	23.5%	39,732	26.9%	15,683
II-Central...	21.2%	12,060	22.2%	14,770	23.9%	20,360	27.0%	16,770	23.9%	1,810	13.4%	10,130	12.1%	20,490	13.0%	7,590
Oriental.....	23.9%	13,550	23.8%	15,818	27.9%	23,776	16.7%	10,350	11.9%	900	13.9%	10,516	21.7%	36,824	28.1%	16,378
Metropolitan.	1.7%	994	.0%	0	.9%	781	.0%	0	.0%	0	1.2%	923	.5%	781	.5%	284
TOTAL.....	100.0%	56,808	100.0%	66,523	100.0%	95,361	100.0%	62,008	100.0%	7,587	100.0%	75,649	100.0%	169,432	100.0%	58,293

60

Table 1.6 Departmental Residence of Agricultural Work Force

Department	Categorization of Agricultural Work Force															
	Farmer (with employees)		Farmer		Land poor		Unpaid family laborer		Coop member		Perm. wage-laborer		Temp. wage-laborer		Unemployed	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
Ahuachapán...	13.3%	7,533	11.7%	7,772	8.7%	7,458	17.1%	10,632	5.5%	420	13.2%	10,011	13.0%	22,037	7.5%	4,390
Santa Ana....	12.5%	7,099	13.1%	8,709	7.4%	6,339	11.6%	7,188	11.1%	840	19.1%	14,416	17.3%	29,303	17.9%	10,454
Sonsonate....	6.3%	3,607	6.4%	4,288	5.6%	4,787	7.7%	4,761	14.4%	1,092	18.2%	13,797	12.0%	20,265	6.0%	3,514
Chalatenango..	7.2%	4,089	9.6%	6,367	7.2%	6,161	5.6%	3,444	1.8%	138	2.1%	1,570	3.0%	5,139	3.5%	2,037
La Libertad..	10.0%	5,708	9.4%	6,260	9.9%	8,462	10.3%	6,370	15.1%	1,145	15.1%	11,457	15.6%	26,357	14.7%	8,566
San Salvador..	3.9%	2,196	2.7%	1,779	5.4%	4,637	2.4%	1,473	16.4%	1,242	4.1%	3,132	3.8%	6,451	3.9%	2,260
Cuscatlán....	1.6%	895	1.2%	828	4.1%	3,517	1.6%	1,020	.0%	0	.9%	662	1.5%	2,495	5.4%	3,172
La Paz.....	7.7%	4,380	6.7%	4,470	9.2%	7,860	10.1%	6,260	19.9%	1,510	8.2%	6,240	6.4%	10,810	6.6%	3,830
Cabañas.....	6.8%	3,850	10.7%	7,140	9.4%	8,000	10.1%	6,290	.7%	50	1.9%	1,420	1.8%	3,010	2.3%	1,360
San Vicente..	6.9%	3,901	4.8%	3,160	5.3%	4,500	6.8%	4,220	3.3%	250	3.3%	2,470	3.9%	6,670	4.1%	2,400
Usulután.....	7.1%	4,046	7.4%	4,908	7.8%	6,630	7.4%	4,616	5.6%	424	7.1%	5,346	11.8%	19,935	14.2%	8,296
San Miguel...	7.8%	4,454	7.0%	4,636	5.9%	5,040	4.6%	2,856	3.6%	272	3.5%	2,658	5.3%	8,926	7.0%	4,098
Morazán.....	2.8%	1,606	1.8%	1,198	5.0%	4,306	.9%	586	1.8%	136	2.1%	1,622	2.2%	3,726	2.2%	1,288
La Unión.....	6.1%	3,444	7.5%	5,008	9.0%	7,664	3.7%	2,292	.9%	68	1.1%	848	2.5%	4,308	4.5%	2,628
TOTAL.....	100.0%	56,808	100.0%	66,523	100.0%	85,361	100.0%	62,008	100.0%	7,587	100.0%	75,649	100.0	169,432	100.0%	58,293

### 1.2.3 Age

The agricultural sector labor force is considerably older than the population as a whole. The average age for the entire sample was 38. In 1990, 43.7 percent of El Salvador's population was 14 years of age or younger.<sup>55</sup> The parameters of this analysis are defined to include only those 16 and older. Hence, the maturity of the sample comes as no surprise. The wage laborers and family laborers as a group are younger than the remaining categories, whereas the land-poor group, while younger than those who have more land, are older than the landless laborers and unemployed.

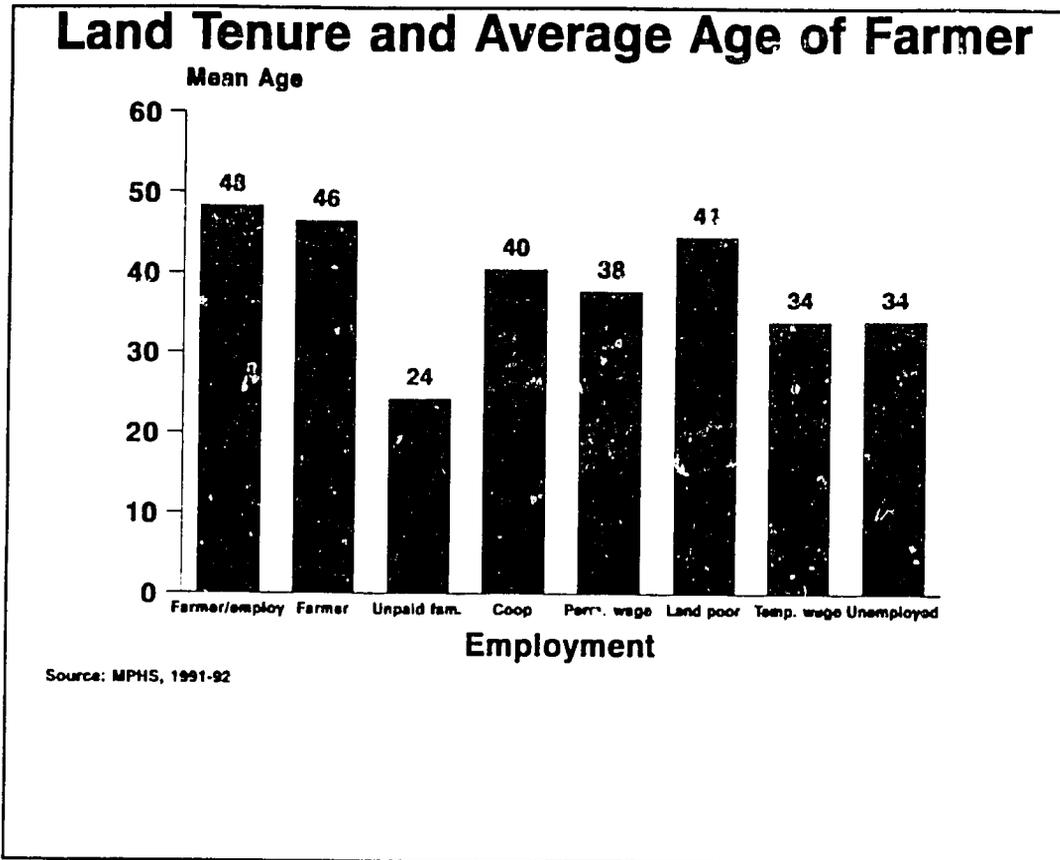


Figure 1.10 Land Tenure and Average Age of Farmer

<sup>55</sup>World Bank, World Development Report, 1992, p. 268.

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#### 1.2.4 Marital Status

Marital status for those in different land tenure categories is compared in Table 1.7. For all categories of land tenure, single individuals are in the distinct minority. Only among the unpaid family laborers (who on average are far younger than the other groups), temporary wage-laborers, and the unemployed do single people have a substantial representation. Among couples, married couples predominate among the landed (especially the landed with employees) whereas common law unions (*unión libre*) are especially common among the wage laborers. This is not surprising because official church-sanctioned marriages are more generally available to the better-off. Hence, when it is found that common law unions are highest among agricultural cooperative members, one suspects that this group contains individuals with lower incomes than those in other land tenure categories. Because these are the beneficiaries of the land reform programs, this finding is expected. Of course, their income at the time of the survey may be as high or higher than that of other groups, but the indications are that earlier in their lives, when they took on a spouse, they did not have the resources to afford a church marriage. Divorce and separation were very uncommon among all tenure types. Widows and widowers were also uncommon, and their incidence is, no doubt, linked to the average age of each group. Hence, the greater prevalence of widows among the farmers with employees is a direct result of the fact that this is an older group of individuals. Perhaps equally important is that the terms "widow" and "widower" are generally only used in El Salvador for those who were been married by the church. As a result, the increased prevalence of widows among the farmers with employees is partly a function of the more frequent occurrence of church-sanctioned marriages among this group.

#### 1.2.5 Literacy and Education

Literacy and education are two factors that often help define the basic life chances of an individual. According to the World Bank, by 1990, at the national level, illiteracy in El Salvador had declined to 27 percent.<sup>56</sup> How does the agricultural population compare? For the sample, 43 percent were illiterate, a far higher proportion than for El Salvador as a whole. Figure 1.11 shows how illiteracy varies among the land tenure types. There are some surprises. The unemployed do not differ markedly from those in other categories. As expected, illiteracy is lowest among farmers with employees, but even then, at 42 percent, it far exceeds the national average. Among farmers who do not have employees illiteracy is higher than 50 percent.

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<sup>56</sup>World Bank, World Development Report, 1992, p. 218. The United Nations 1990 report cited earlier (p. 54) gives the same figure, citing UNESCO as the source.

Table 1.7 Land Tenure and Marital Status

	Categorization of Agricultural Work Force															
	Farmer (with employees)		Farmer		Land poor		Unpaid family laborer		Coop member		Perm. wage-laborer		Temp. wage-laborer		Unemployed	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
<b>Marital status</b>																
married.....	56.4%	32,064	48.9%	32,504	43.7%	37,278	7.9%	4,921	21.6%	1,642	25.6%	19,347	18.8%	31,925	18.4%	10,752
common law...	28.9%	16,396	35.9%	23,858	31.1%	26,542	9.8%	6,065	52.6%	3,993	36.3%	27,467	30.8%	52,171	27.0%	15,712
single.....	8.8%	5,000	12.1%	8,053	20.2%	17,235	80.2%	49,728	24.8%	1,883	34.4%	26,001	46.0%	77,937	51.6%	30,084
divorced.....	.5%	292	.1%	50	.2%	134	.2%	152	.0%	0	.1%	42	.3%	427	.0%	0
separated....	1.3%	711	1.0%	654	1.6%	1,381	.7%	445	.9%	69	1.7%	1,317	2.2%	3,676	1.6%	912
widowed.....	4.1%	2,345	2.1%	1,404	3.3%	2,791	1.1%	697	.0%	0	1.9%	1,475	1.9%	3,296	1.4%	833
<b>TOTAL.....</b>	<b>100.0%</b>	<b>56,808</b>	<b>100.0%</b>	<b>66,523</b>	<b>100.0%</b>	<b>85,361</b>	<b>100.0%</b>	<b>62,008</b>	<b>100.0%</b>	<b>7,587</b>	<b>100.0%</b>	<b>75,649</b>	<b>100.0%</b>	<b>169,432</b>	<b>100.0%</b>	<b>58,293</b>

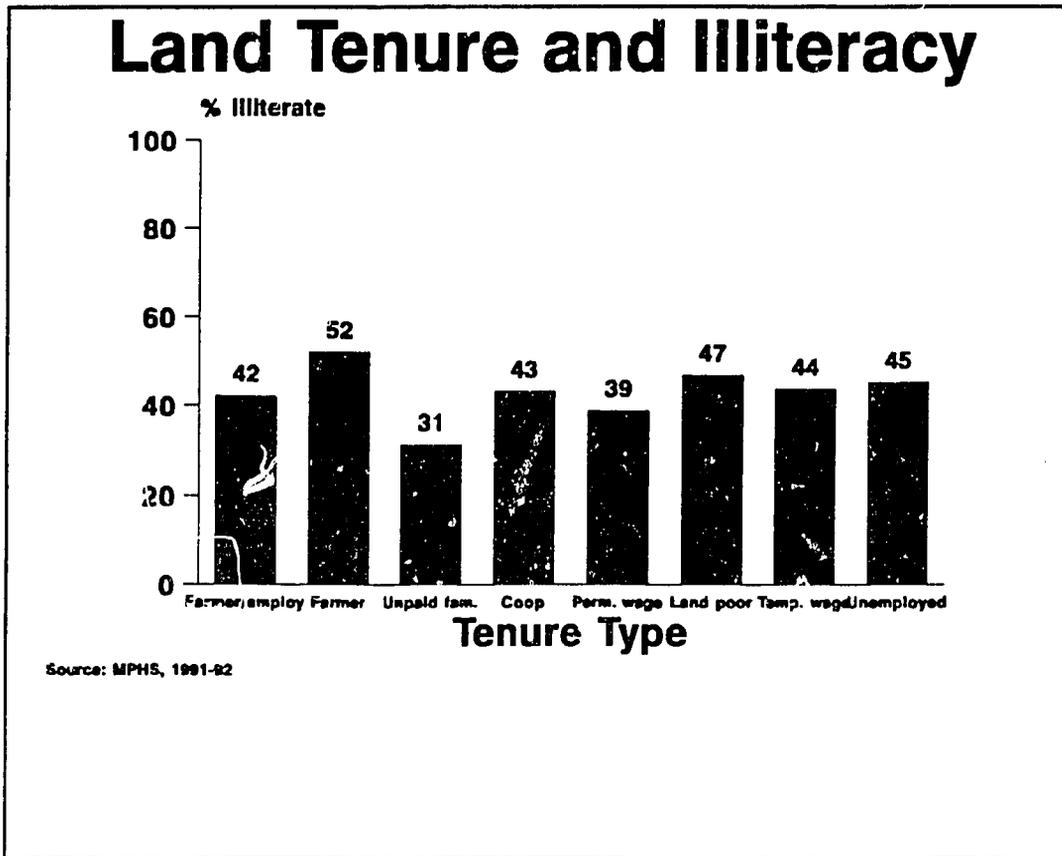


Figure 1.11 Land Tenure and Illiteracy

40

Information on years of schooling for each category is presented in Figure 1.12. For the sample as a whole, the respondents averaged 2.5 years of education. It is important to note that for no category does the average education even achieve that of primary school completion. The national trends, up through the end of the civil war, were not encouraging, as the percent of the primary-school age children actually attending school declined from levels in 1965.<sup>57</sup> Particularly distressing is the extremely low level of education. Farmers without employees average only 1.4 years of schooling, a level that will make it difficult for them to be able to read educational material that might help them improve their crop yields. Similarly, the low levels of education among the land poor and wage laborers will limit the ability of these groups to find good jobs outside the agricultural sector.

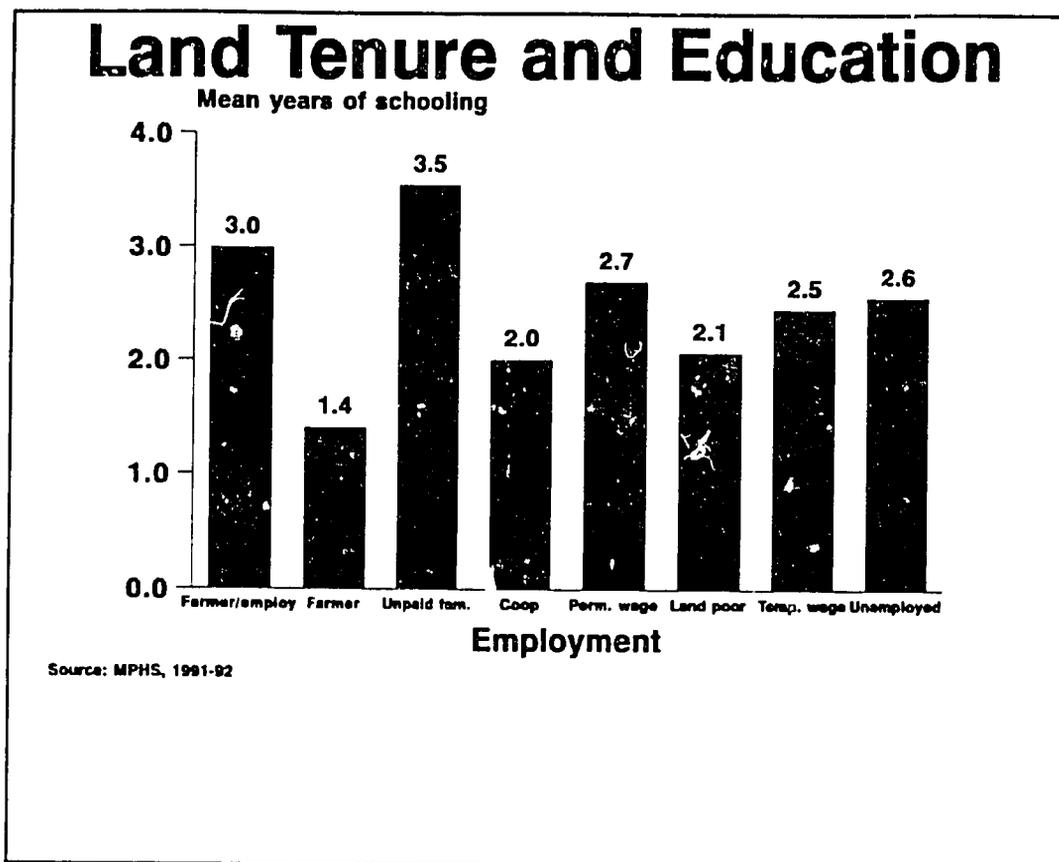


Figure 1.12 Land Tenure and Education

<sup>57</sup>The World Bank report shows 82 percent attendance in 1965 and 78 percent attendance in 1989, one of the few countries in the world in which such a decline occurred. World Bank, *World Development Report, 1992*, p. 274.

41

### 1.2.6 Income

Calculation of income via surveys has always been difficult and the data utilized in this survey do not fully overcome the several limitations others have faced. One of the most serious problems encountered is that people are often reluctant to disclose their income, or at least all of their income. Among agricultural populations in the developing nations, the problem becomes even more challenging because many small farmers keep few if any records of their sales and production expenses. They often know, only in a very general way, what their income actually is. It is fortunate that the MPHS was particularly careful in attempting to obtain as much income information as possible, including crop income (including family consumption) and production costs (including labor costs but excluding land costs). The MPHS also included income from forestry, fishing, livestock, and poultry. The income data on crops, however, was collected for all crops taken together, rather than for each crop. The survey described in chapter 2 of this report collected data on the seven major crops grown in El Salvador and thus allows for a detailed look at crop yields, production costs per crop, and so forth. In sum, farm income was calculated as the total of all sales plus the total of household consumption of crops minus production expenses. This total was then prorated on a monthly basis.

Farm income is relevant only for those who have land; the landless laborers receive salary income. Hence, also included in the calculation are: (1) salaries earned (on a monthly basis) from principal and secondary occupations and (2) payment in kind (*en especie*) and payment in allowances (*bonificaciones*) estimated on a monthly basis. When added to the farm income, this provided a total of what is called here "agricultural income." The only labor income source not included was that earned in occasional work (*actividades eventuales*). Of the entire sample, 99.3 percent of the respondents reported no such income.<sup>58</sup> Those who did averaged 73.6 colones per week. However, since it is assumed that this was not an income earned for each week of the year, and there is no way to know if it represented only a few weeks or many weeks since the question in the survey only referred to income from occasional work for the week prior to the interview, it was preferable to exclude this income for the 0.7 percent of the population that earned it rather than to inflate the incomes of these individuals by assuming that they earned that week's amount for each week of the year.

It is also known that those in the agricultural sector often have important additional income. It was possible to include income from pensions, remittances, help from family members living in El Salvador, rents, business income, and other sources of income. The total of these income sources became the calculation for nonfarm income, which, when added to the agricultural income described above, provided a total income figure. We believe that this provides a comprehensive picture of all income earned by the respondents to the MPHS, but we once again stress that income figures are only partially reliable.

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<sup>58</sup>Note that MIPLAN makes a distinction between "actividades eventuales" and salaried workers who are temporary. Temporary salaried workers are those who regularly obtain work, but the work is not steady. The "actividades eventuales" category represents those who earn income only from time to time.

One final caution. In this discussion of income, agricultural and total, I am not attempting to estimate the income from crops and livestock alone. That is undertaken in chapter 2 of this report. In this chapter the attempt is to provide an overall picture of income earned by a farmer from his/her various enterprises.

First, total income (agricultural and nonfarm) is examined. As is apparent, in Figure 1.13, those with access to land earn far more than those without access to land. That is, incomes of the landless, land poor, and unemployed are only a fraction of those earned by the landed, especially by farmers who employ labor. Members of cooperatives also have comparatively high incomes, earning somewhat more than farmers who do not employ laborers. The large and regular infusions of credit to the cooperatives have allowed them to provide employment to the cooperative members and their families, thus raising their incomes above those of other farmers who do not have access to regular employment.

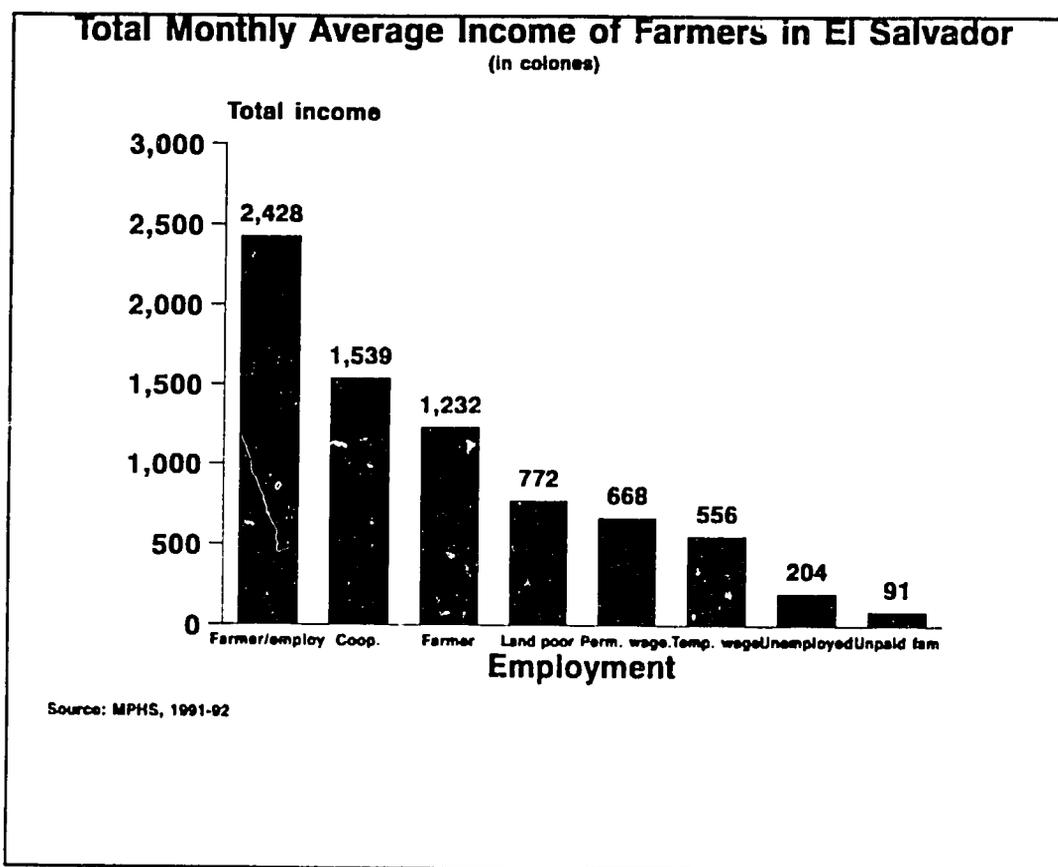


Figure 1.13 Total Monthly Average Income of Farmers in El Salvador (in colones)

43

Temporary wage-workers, as expected, earn less than permanent wage-workers, but the difference is not great. The situation of the unpaid family laborers and the unemployed is particularly distressing, with monthly incomes of less than \$11 for the family laborers, and less than \$21 for the unemployed. Such incomes are only 11 and 22 percent, respectively, of the national per capita income (1990 data).

These income figures need to be put into a broader national perspective. The initial plan was to compare the farmer incomes with the poverty line, but the Sigma One 1989 study of poverty in El Salvador found that 99 percent of farmers were categorized as living in "extreme poverty" and that 40 percent of all people in El Salvador were living in extreme poverty.<sup>99</sup> A more relevant comparison might be to determine: (1) how the incomes of individuals in the agricultural sector compare with incomes of individuals in other occupations in El Salvador, and (2) what are per capita incomes among the various categories of farmers in the study. Recall that the overwhelming majority of the respondents, even among family laborers, were married, and therefore these incomes would have to be divided among all family members (plus, of course, the incomes earned from other family members).

First, the total incomes of the farmers are compared with the incomes of those in other sectors. The income data in Figure 1.13 should be kept in mind, recalling that the land poor earned 772 colones per month, the temporary wage laborers 557, and the unemployed 204. Given the large number of people this represents in rural El Salvador, and given the very limited amount of land that could be distributed to provide each of them with sufficient land from which they could earn a livable wage, nonagricultural employment becomes a viable option. If employment for these individuals could be found in other sectors, the question becomes what would they earn?

To answer this question the total income figures (wages and other income) from the national MPHS were examined. In the industrial sector, nationwide, steady wage-workers earned an average of 1,161 colones per month. In urban areas this increased to 1,243 colones and in rural areas it declined to 819 colones. The much higher incomes earned in urban areas are reduced in real terms by the higher cost of housing, but nonetheless it is clear that industrial employment, urban or rural, would provide significantly higher incomes for the land poor, temporary wage-workers and, of course, the unemployed, than they are currently earning. Incomes in the construction sector are even higher, averaging 1,238 colones nationwide. It is equally clear, however, that those who have land (or are members of a cooperative) earn as much or more than they would as industrial or construction workers. Hence, farmers are better off to continue farming *if they have access to sufficient land*. The national economy would also

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<sup>99</sup>The Sigma One measure of poverty is defined as those families that use 70 percent or more of their income to purchase a nutritionally adequate food basket. See Curtis E. Youngblood, Cutberto Parillón D., Ralph L. Franklin and David L. Franklin, "An Assessment of the Need for Directed Food Assistance to Support A Proposed Structural Adjustment Program in El Salvador," Sigma One Corporation, August, 1989, report prepared for USAID, typescript.

benefit because rural employment slows urban migration and reduces the enormous costs of expanding urban infrastructure to accommodate the new immigrants.

We now turn to the question of per capita incomes. For El Salvador as a whole, the national monthly average was 367 colones, which corresponds to approximately \$550 per year.<sup>60</sup> Urban per capita incomes averaged 519 colones and rural averaged 228. To calculate per capita incomes among the agricultural population were calculated by using the 1991-92 size of rural households figure of 5.23 people and the number of employed people per household average of 1.61.<sup>61</sup> This means that each employed worker was responsible for supporting 3.25 people. Dividing the income data shown in Figure 1.13 by this number provides per capita income data, as shown in Figure 1.14. Once again it is clear that farmers with access to land of 1 mz. or more can earn more than the national average, whereas the land poor, landless, and unemployed cannot. Moreover, Figure 1.14 also shows that even permanent wage-laborers earn considerably less than the national average of incomes.

Access to land is obviously very important in determining income levels in the agricultural sector in El Salvador, and the greater the amount of land owned, the greater the income. Figure 1.15 shows the strong relationship between the amount of land worked and agricultural income.<sup>62</sup> For all farmers with access to land, the larger the amount of land, the higher the agricultural income. This is valid among farmers who have fee simple access as well as for those who are renters. Among those with less than 0.5 mz. of land, renters actually have higher agricultural incomes from their land than do fee simple owners (684.7 colones versus 582.7 colones), which is a function of the higher intensity of cultivation among those who pay rental for the use of land versus those who own their land. For farmers with 0.5 mz or more of land, renters earn less than owners, although the difference is not great until the farms are 10 mz. or larger. For example, among farms in the 1-4 mz. size, renters earn 1,027 colones monthly versus 1,321 colones monthly for fee simple owners. The differences persist in the largest farm size cohorts, but there are insufficient renters in the largest cohorts (20 mz. or larger) for the means to be a reliable figure.

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<sup>60</sup>This figure is only about half of that produced by using national accounts statistics, following the World Bank methodology. The per capita income figures given by the World Bank include many sources of income that are not include in a labor force study (especially profits of corporations). The labor force survey provides a more realistic picture of disposable income in the hands of the labor force.

<sup>61</sup>We deal with rural households here rather than agricultural households since in a given household, there may be workers in more than one sector. The data reported elsewhere in this chapter focus on the agricultural sector labor forces which, for the most part, is rural. But we have shown that a portion of agricultural sector households are urban, and therefore the per capita figures shown in this section will vary if the household is located in an urban area (where household size is smaller).

<sup>62</sup>Note, however, that the horizontal axis is not linear, and as a result the curve is exaggerated.

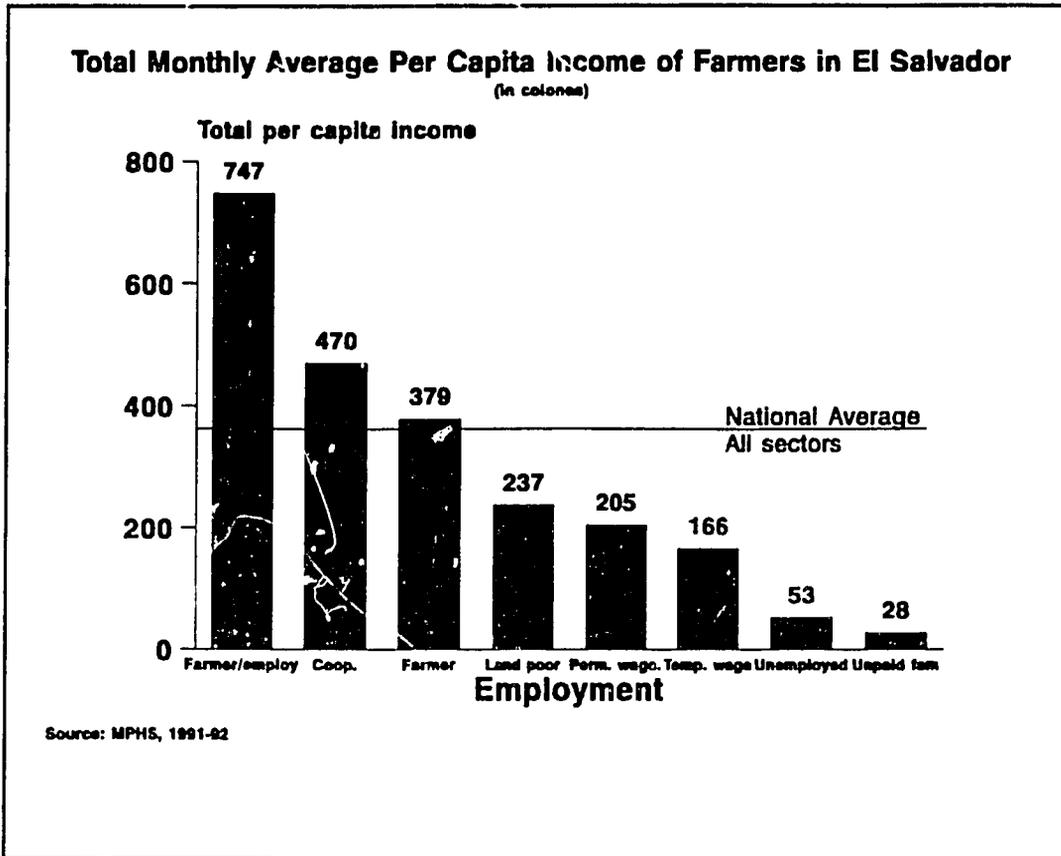


Figure 1.14 Total Monthly Average Per Capita Income of Farmers in El Salvador (in colones)

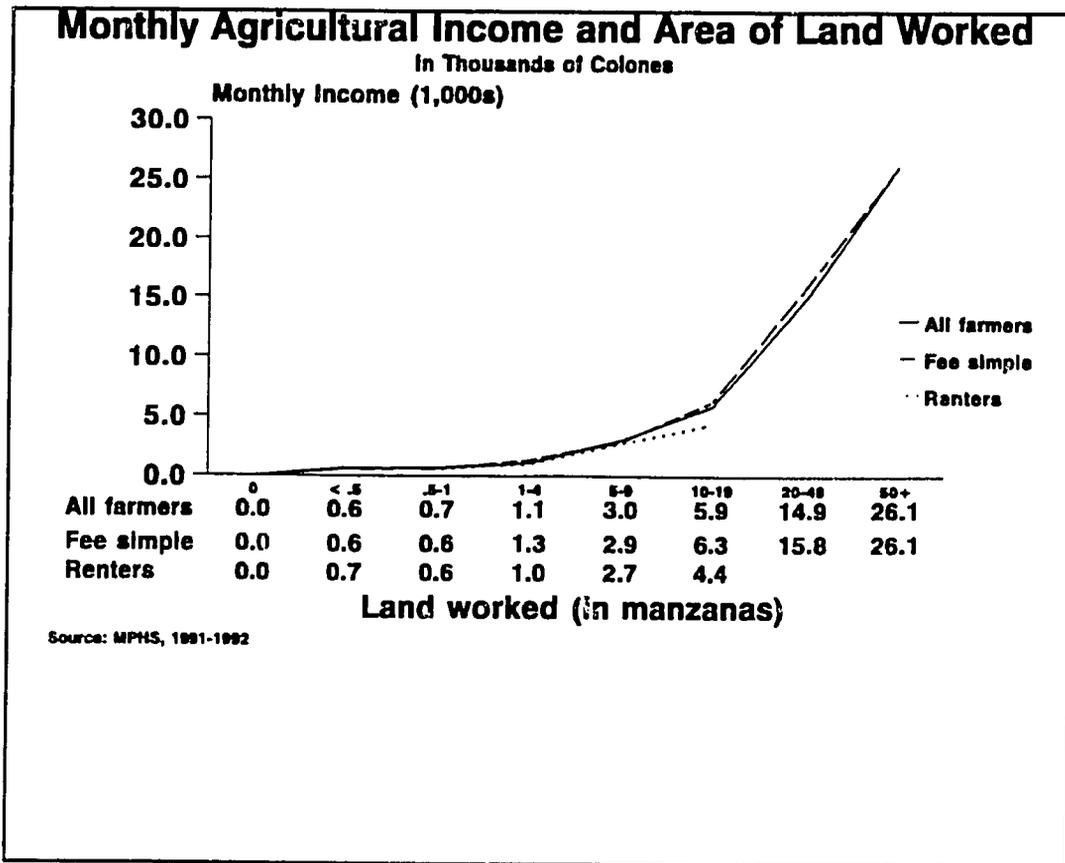


Figure 1.15 Monthly Agricultural Income and Area of Land Worked, in Thousands of Colones

47

It is possible to examine these agricultural incomes in terms of national averages of employment outside the agricultural sector. Steady wage laborers in the industrial jobs averaged 1,161 colones in the 1991-92 MIPLAN survey. This means that farm owners who have 1 mz. or more of land and earn an average of 1,321 colones monthly are better off with their farms than they would be if they worked in industry.<sup>63</sup> This is based on farm income alone. Total incomes of fee simple farmers of 1-4 mz. of land average 1,626 colones per month. Renters, on the other hand, only earn agricultural incomes higher than wage workers in the industrial sector when they rent 5 mz. or more of land (2,737 colones/month).

The relatively low incomes among farmers who do not employ laborers can also now be understood: most of them work very small plots. Of the farmers who do not employ laborers in El Salvador, 53 percent work less than 1 mz. of land. Taking the group that has been defined as "farmers," which already excludes those who work less than 1 mz. of land, 97.5 percent work only 1-4 mz.

In addition to the amount of land worked, the form in which land is held has an impact on income, but the relationship is less direct. Fee simple ownership of land has long been found to produce higher incomes than indirect forms of tenancy.<sup>64</sup> It is in part for this reason that USAID, the World Bank, and the Inter-American Development Bank have each embarked upon land titling programs. In El Salvador there has been particular sensitivity to the impact of renting on both rural incomes and social stability. Indeed, it was that concern that motivated Phase III of the 1980 land reform, viewed then, as now, as largely a counterinsurgency effort. Figure 1.16 shows the impact of the form of land tenure on total incomes of the farmers. This figure only includes data on those who work land, and hence the landless are excluded.

The graph in Figure 1.16 shows two sets of bars. The left bar for each tenure type merely reports total monthly income, whereas the right bar in each pair reports that income as controlled for the size of land being worked.<sup>65</sup> For all tenure types, the monthly income averaged 1,316 colones (about \$165). All of those with access to land fare relatively well when

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<sup>63</sup>N.B. The MIPLAN data groups farm size from 1-4 mz. Hence, it is not the case that farmers who own at least 1 mz. earn more than industrial workers. Rather, the only true statement to be made from the MIPLAN data set is that those who own between 1-4 mz. earn more.

<sup>64</sup>This calculation is complicated by the fact that the cost of land is not cleanly subtracted out of the income figures. The survey did subtract out "production costs," and it is possible that many renters and even some land owners calculated those costs as part of production costs. In a survey of this magnitude, however, when agricultural income was only one small part of a much larger questionnaire, the questionnaire did not attempt to explicitly include the costs of land (either actual or implicit) in the survey.

<sup>65</sup>The control is accomplished by introducing the amount of land worked (in mz.) as a covariate in the analysis of variance equation.

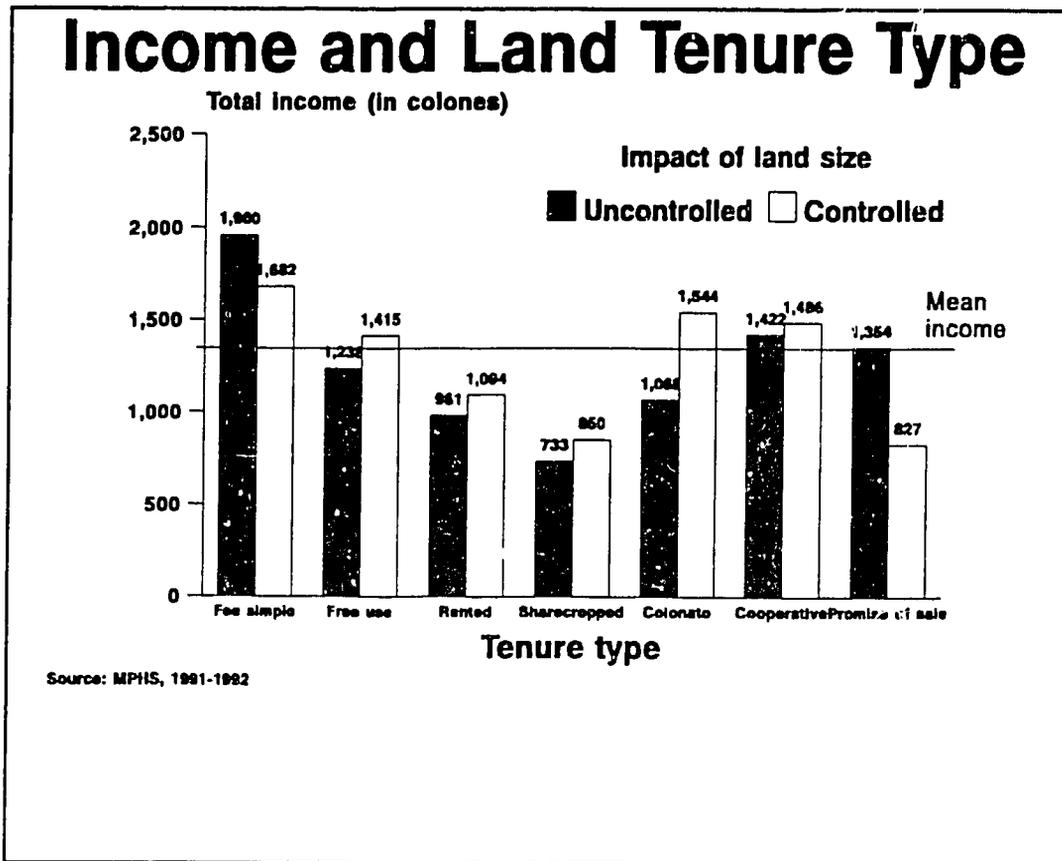


Figure 1.16 Income and Land Tenure Type

compared with those who have wage-labor jobs in the industrial sector (which averaged 1,161 colones/month); only the income of renters, sharecroppers, and colonos fell below the income earned by wage-labor industrial sector jobs. Both tenure type and the amount of land worked have a significant ( $< .001$ ) impact on income, but the impact varies with tenure type. For the land that is owned fee simple, controlling for size of land worked reduces the incomes of this group from 1,961 to 1,682, much closer to the mean of all of those with land, but still far above the overall mean of 1,316 colones. Hence, even when the impact of the amount of land is controlled, fee simple farmers do better, as a group, than farmers with any other form of land tenure. They are followed, as a group, by farmers who own land in free use. When the amount of land they own is included in the equation, their incomes rise, approaching those of the fee simple owners. Presumably, many of these farmers are children of fee simple owners who expect to inherit their free use land from their parents. As a result, over time, many of the free use farmers presumably will become fee simple farmers, and for that reason it is not surprising that their incomes nearly match those of the fee simple once the data are adjusted to compensate for the smaller amount of land they work.

169

There is one very important caveat to this projection that free use farmers will eventually have incomes that equal the incomes of the fee simple farmers: one cannot be at all certain that they will have as much land as their forebearers. Since, as has already been shown, the amount of land owned has a strong impact on income, if they do not obtain as much land as the fee simple group, their incomes will be lower. Indeed, the evidence in the data set is that they will not, in fact, have as much land as those from whom they are inheriting the land. One only need look at the uncontrolled data for the free use category (the left bar in Figure 1.16) to see that their incomes are far below those of their fee simple relatives, a result primarily of the smaller amount of land worked.

Note should also be taken of the relatively high incomes of those in the cooperative sector. Their incomes remain high whether or not the results are controlled for the size of the farm.

Perhaps the most important finding is that the largest land tenure group (in terms of number of farmers), the renters and sharecroppers, have the lowest income of any major group (only the controlled "promise of sale" group is lower). Renters' incomes fall below the national average of the industrial sector (1,161 colones/month) but are higher than incomes from rural industrial jobs (819 colones/month). When the size of the rented and sharecropped farms is controlled, incomes increase, but remain far below the average for all farms. This finding suggests that those who encouraged the enactment of the Phase III Land-to-the-Tiller law were on firm ground, at least in terms of the income implications of indirect land tenancy.

It should be repeated that the income data presented above is total income, including off-farm income. Since the focus in this section of this report is on the relationship between land tenure and income, it is appropriate to reexamine these findings, including only income earned from the farmland itself. These data are presented in Figure 1.17 below, and present a picture quite similar to that which has been already seen. Agricultural incomes average only 1,151 colones per month, compared with an average of 1,316 for total income.

The patterns for agricultural income alone are quite similar to those for total income. That is, in each case in which incomes are adjusted for farm size, the increase or decrease is in the same direction and of approximately similar magnitude. Once again it is found that farmers with fee simple title have the highest earnings. Renters fare more poorly, earning (unadjusted) 866 colones per month. Incomes of cooperative members, devoid of wage income, drop by 18 percent, from 1,486 to 1,217 colones (controlled for land size), which indicates that the wage-based income made available through various credit programs to the cooperatives is an important source of income for the members. The exclusion of nonfarm income also lowers the income of fee simple owners, but the magnitude is somewhat lower (14%).

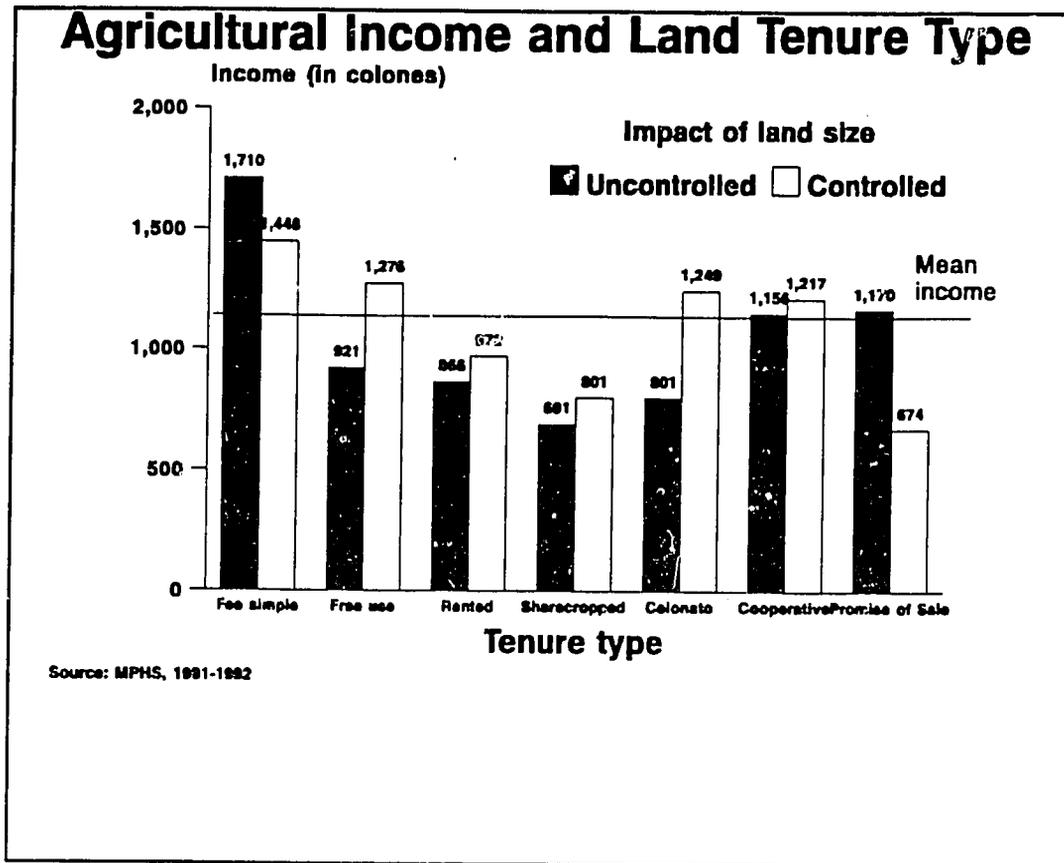


Figure 1.17 Agricultural Income and Land Tenure Type

### 1.2.7 The Impact of Indirect Tenancy on Income

In El Salvador, as elsewhere, indirect tenancy in the form of renting is linked directly to lower incomes. As shown above, renters, on average, earn far less than the average landed farmer, a difference that declines somewhat when the amount of land worked is factored into the equation, but that does not disappear. There are four main reasons why renters earn less on the same amount of land than do their fee simple counterparts. First, in many cases the land rented to them is of inferior quality; indeed, often the reason why the owner rents it in the first place is because he/she finds it uneconomical to farm. A second reason is that insecure tenancy constrains a farmer from investing in the land, and hence infrastructure improvements and the planting of permanent crops is less frequent among renters than among those with secure title to their land. Third, renters are far less likely to be able to obtain credit for their land because lenders often demand land titles as collateral for the loan. Finally, renters tend to be more abusive of the land they work, knowing that it is not theirs as a long-term trust. Hence, they rarely use soil conservation measures, and erosion rapidly takes its toll of topsoil.

How valid are these factors in explaining the differences in income between renters and fee simple owners in El Salvador? There is no way within this data set to test the quality of the land being farmed. Further, unfortunately, the questionnaire did not include questions on conservation practices. One can, however, look at credit and planting of permanent crops. Credit is often argued to be a critical factor. In Table 1.8 a comparison is made between credit requested and credit received on the one hand and the form of land tenure on the other. Renters were somewhat more likely to have requested and received credit than were fee simple owners. Owners may prefer to avoid risking their land because farms are often used as collateral for loans. Renters, on the other hand, use the crop as collateral and hence have lower risks and greater incentive to borrow. However, this finding does not explain the differences between the incomes of fee simple owners and renters. It is also important to note that credit use was relatively uncommon, and generally involved less than 20 percent of the farms. Almost all who reported requesting credit, however, did receive it.

The hypothesis that permanent crops are planted less by those with insecure tenancy than by those with secure tenure, however, is borne out by the data. Fee simple owners are twice as likely as renters to plant permanent crops. These differences might help explain some of the variation in incomes. It is important to note an even more important point: *at a maximum, even among fee simple owners, fewer than 15 percent of farmers in El Salvador plant permanent crops.*

Table 1.8 Land Tenure and Credit

	Tenure Type													
	Fee simple		Free use		Rented		Promise of sale		Colonato		Cooperative		Sharecropped	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
Requested credit														
Yes.....	24.2%	16,636	17.8%	4,189	29.1%	27,899	51.8%	3,396	22.7%	463	45.7%	4,593	28.9%	3,052
No.....	75.8%	51,973	82.2%	19,288	70.9%	68,106	48.2%	3,159	77.3%	1,576	54.3%	5,447	71.1%	7,512
TOTAL.....	100.0%	68,609	100.0%	23,477	100.0%	96,005	100.0%	6,555	100.0%	2,039	100.0%	10,040	100.0%	10,564

Table 1.9 Land Tenure and Planting of Permanent Crops

	Tenure Type													
	Fee simple		Free use		Rented		Promise of sale		Colonato		Cooperative		Sharecropped	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
Planted a perm. crop														
Yes.....	13.4%	9,182	2.1%	492	1.7%	1,682	8.5%	559	.0%	0	.8%	94	1.4%	150
No.....	86.6%	59,427	97.9%	22,985	98.3%	94,343	91.5%	5,996	100.0%	2,039	99.2%	9,956	98.6%	10,414
TOTAL.....	100.0%	68,609	100.0%	23,477	100.0%	96,005	100.0%	6,555	100.0%	2,039	100.0%	10,040	100.0%	10,564

\*Includes only the first crop planted. A reduced number of respondents planted two or more crops.

### 1.3 Policy Recommendations

The best estimates are that in 1971, 65 percent of rural families in El Salvador were landless or land poor, defined as those who have less than 0.7 hectares of land. The data analyzed in this chapter show that despite Latin America's most extensive nonsocialist land reforms, which incorporated 280,000 hectares of land (one-fifth of the total land area of the country) and 10 percent of the country's population, on the eve of the settlement of the civil war, 54 percent of the agricultural work force (more than 330,000 adults) remained landless, land poor, or unemployed.

The peace accords that brought the war to its conclusion may at best, if they are fulfilled completely, eventually directly resolve the landlessness problem of some 75,000 adults, thereby leaving 255,000 adults, or 40 percent of the agricultural work force, landless, land poor, or unemployed. In absolute numbers, this is about the same number of Salvadorans who were landless or land poor prior to the onset of the civil war.

Among those who do have land in El Salvador, about half are renters, a number far higher than had been estimated by USAID consultants in prior studies. There is clear evidence that over time there has been a steady increase of renting land (from about one-third to one-half of all properties), this in spite of the widely publicized Phase III of the land reform (the Land-to-the-Tiller law), modeled after and designed by those who implemented a similar reform in Vietnam. Landowners have few incentives to sell at prices that renters could afford to pay. Rather, the steadily rising prices of land, a function of increasing population density coupled with inflation-proof income generated from land rents, provides very little incentive for owners to sell. This finding is disturbing because renters have less land than do farm owners, and their agricultural incomes are lower, about two-thirds of incomes of farm owners, even when controlled for farm size. The incomes of renters fall below the incomes earned in industrial jobs, whereas small landholders earn about the same as their industrial counterparts. Moreover, owners are twice as likely to plant permanent crops and more likely to use important conservation measures on their properties.

These stark conclusions need to be placed within a more general context of four key factors constraining El Salvador's ability to deal with the implied policy challenges.

First, El Salvador is extremely small and densely populated. With a total size of 21,000 km<sup>2</sup>, it is the smallest country in mainland Latin America, and is even smaller than the Caribbean island countries of Cuba, Dominican Republic, and Haiti. With a population of over 5 million, its density of approximately 240 people per km<sup>2</sup> exceeds that of Haiti (225/km<sup>2</sup>). If El Salvador were to attempt to provide to the landless, land poor, and unemployed population the same amount of land being given to the Peace Accords beneficiaries, namely 3.5 hectares each, it would require 1.2 million hectares of land, or 56 percent of the total land area of the country. In short, El Salvador has too many people and too little land to be able to effectively address the problem of landlessness.

Second, the scarcity of land is further exacerbated by the severe environmental degradation that much of El Salvador has suffered in recent years. This country has the smallest proportion of its land in forest of any country in mainland Latin America. Its rivers are contaminated and its soils subject to extreme erosion. Ironically, however, the hostilities of the civil war prevented many farmers from cultivating their fields, and as a result, some areas have been left fallow, thereby allowing secondary growth to return and soil erosion to be reduced. Furthermore, pesticide use has dropped as a result of the decline in cotton prices that has virtually eliminated the planting of that crop in the coastal lowlands. Nonetheless, with the war over, it can be expected that within a few years farming activity will return to normal levels and environmental degradation will once again accelerate.

Third, El Salvador has committed itself to a set of neo-liberal policies that favor lowered tariffs, regional economic integration, and competition on the world market. Significant progress has been made in the agricultural area that promises to stimulate the flow of agricultural goods within Central America (or at least between Guatemala, El Salvador, and Honduras). As a result, competitive pressures have increased on farmers in El Salvador. In addition, the lowered tariffs on manufactured goods are likely to decrease demand within El Salvador for some of its less competitive goods while production sharing employment in *maquiladoras* is likely to increase. This shift in industrial employment is likely to result in an overall increase in jobs, but at lower wages. As a result, industrial employment is becoming an increasingly less attractive alternative to agriculture than it was.

Fourth, capital constraints recently have become far more serious in terms of medium to long-run economic assistance. With the end of the Cold War there has been a dramatic reduction in the geopolitical importance that Central America holds for the United States. This, coupled with the severe budgetary pressures facing the U.S. government, which have prompted a reduction in foreign aid expenditures, and similar constraints in Japan, makes it difficult to imagine that the levels of foreign assistance available to El Salvador in the 1980s will be replicated in the second half of the 1990s.

What, then, are the policy options?

In terms of the landless, land poor, and unemployed population, we see very little opportunity for these individuals in terms of traditional, smallholder agriculture. There are simply too many people and not enough land. Therefore, there are two options, one rural and the other urban.

In rural El Salvador the most attractive alternative to small landholding is employment in agroindustry. The question, of course, is which crops and for what markets. We have no ready answer to this question, one that is beyond our scope of work on land tenure. What we do know is that such options will need to be explored. A second option in the countryside is development of rural factories, including assembly industries. Fortunately, much of El Salvador is readily accessible by good roads, so transportation is not a major problem. Nonetheless, many bridges were destroyed during the war, most notably the major east-west spans crossing

the Rio Lempa. The temporary Bailey bridges now in use there are single lane spans that will ultimately have to be replaced by conventional bridges if industrial traffic builds appreciably. Apparently, the government of Japan has an interest in lending money to rebuild these spans. The electric grid was also damaged during the war, but many of the posts have been replaced and service has been restored. Electric service is still prone to frequent interruptions, but as the war damage is overcome, such events should become less frequent. In any event, nearly all areas of significant population concentrations have electric service, so that rural factories are feasible throughout most of the countryside.

Urban factories offer a second option for the landless, land poor, and unemployed. At the moment, most of those factories are concentrated in the heavily overcrowded San Salvador area. Far less taxing on the urban infrastructure would be factory expansion in the cities and towns to the east and west of San Salvador. But again, there is the problem of the product and the market. We are in no position to make recommendations on that question.

Among the landed population, we divide our recommendations by tenure type, but first concern ourselves with the problem of tenure security. The tractional land registry system, our study concluded, was so deficient that it would be impossible to reform. Efforts to do so have been made in the past and have failed. In particular, the efforts to replace the "folio personal" with the "folio real" (registration of the owner versus registration of the property) have not met with significant success, and in any event have been restricted exclusively to the registry in San Salvador, leaving much of the rural property excluded from the more modern system.

On the positive side, however, El Salvador has seen the establishment of the highly efficient and successful *Registro Social de Inmuebles*, which thus far largely has limited itself to registering urban properties in housing projects. The highly advanced computerized technology developed in that project could be expanded to incorporate all of El Salvador and slowly replace the existing antiquated registry. In order for that to happen the National Cadastre Office would require a major infusion of cash so as to be able to complete the national cadastre that was initiated with USAID funds in the 1970s and to upgrade the sections of that cadastre that were completed before the war broke out. Funds would need to be made available to guarantee compatibility between the computerized system of the cadastre and the registry. Technical problems, however, have been studied by the Salvadoran agencies involved and are well understood.

If the new land registry were expanded, then problems of tenure insecurity could be greatly minimized. Moreover, the new system seems fully capable of providing an overall land use information system that could benefit the expanding needs for municipal revenue. Municipal governments have greatly increased their capabilities and functions under the reforms approved in 1986 and the fiscal reforms of 1992. They took on responsibility for numerous local infrastructure rehabilitation in the context of the Municipalities in Action (MEA) program. The legal requirement that all such projects be presented by citizens in open town meetings (*cabildos abiertos*) has made these efforts far more participatory than any previous local infrastructure

efforts. The MEA funding is being reduced as ESF funds are being reduced to El Salvador. A revitalized cadastre could help municipal government replace the external funds via a land tax.

Of the landed population, renters need the greatest attention. The GOES and international donors must recognize that renting will remain a major, and probably increasing, part of rural land tenure for the indefinite future. There was little evidence that policymakers were thinking about crafting appropriate policies for this group. Indeed, there was a tendency to ignore renters as somehow representing a not totally legitimate form of land tenure. Doing so can only harm the prospects for agricultural development in El Salvador. The land rental laws that are on the books do not provide sufficient security guarantees to renters and owners, and in any event are so cumbersome that they are unenforceable. New rental legislation has been proposed in the new agrarian code (*Código Agrario*), but as of this writing the code is still far from being finalized and formally debated by the legislature. More troubling, the draft law establishes the unrealistic requirement that all rental contracts must be registered in the Social Property Registry, when currently there is only one office of the registry, located in San Salvador. Even when regional offices are established the transaction cost to register rental contracts may exceed their monetary value.

Of particular concern, given that half of all of those with access to land are renters, are the environmental implications of extensive renting. USAID, as well as other donors, with its newly expanded emphasis on the environment, must seek ways to create incentives for rental property to be used in an environmentally sound fashion. At present no such incentives exist.

A recommendation that we can make that applies to farmers in all land tenure categories is that far more needs to be done to invest in human capital. Educational levels were low among all categories of farmers; even among farmers who employ workers, 42 percent were illiterate, and among small farmers who employed no workers, 52 percent were illiterate. Average years of schooling among the agricultural population in El Salvador is around three years; among the land poor it drops to 2 years. Moving these farmers into a factory setting is going to be difficult. For the most part, illiterate farmers will not be employable in factory settings. Indeed, given the increasing technical requirements in agroindustry, there may be little role for the illiterate population. Faced with this reality, El Salvador has little choice but to embark upon a major adult literacy campaign so as to better position this work force for the challenges ahead. Without such a program, there will be precious few options for the illiterate 43 percent of the agricultural population.

Land tenure remains a highly problematical component of the Salvadoran economy. Land is a finite and, for the most part, degrading resource in this tiny country, while population continues to grow at about 1 percent per year. With the war over and the pressure for out-migration reduced, population growth may spurt ahead. Indeed, it is quite common to find a "baby boom" at the conclusion of a long war. Urban migration will continue and perhaps even accelerate in the years to come, but such migration will not reduce much the pressure on the land significantly.

In light of these realities, this study is only a first, tentative attempt to understand the magnitude and complexity of the problem. This study is limited by its snap-shot look at the problem, necessitated by the availability of a single year of data on which the analysis had to be conducted. But as of this writing the 1992-93 MIPLAN survey data is being made available, and its analysis is recommended in the strongest terms. Ideally, a consortium effort could be established involving MIPLAN and the Ministry of Agriculture, as well as some private external bodies such as FUSADES, CENETEC and some of the Salvadoran universities that are interested in the subject. As soon as the agricultural census is conducted and the data available from that source, a fuller picture will become available. At present, however, there is virtually no such analysis underway or contemplated. The studies that are available in El Salvador are merely warmed over restatements of old data sets, especially of the 1987-88 McReynolds report cited frequently in this chapter. Few poor, small countries possess the magnificent resources of the MIPLAN survey unit, but it is disappointing to see how little use is being made by Salvadorans (and indeed international donors) of that resource. USAID has long supported the MIPLAN unit, but has failed to utilize the data produced by it. Only by having accurate, current data can we hope to be able to make informed policy.

## **2. SMALL FARMERS IN EL SALVADOR, 1993: A COMPARISON OF LANDOWNERS, RENTERS, COOPERATIVE MEMBERS, "FINATEROS," AND "TENEDORES"**

This chapter seeks to fill gaps in our knowledge about farmers in El Salvador by utilizing a special purpose survey conducted for this study called the 1993 Land Tenure Survey. The survey includes five distinct target groups: (1) beneficiaries of Phase I of the 1980 agrarian reform (ISTA cooperatives); (2) beneficiaries of Phase III of the agrarian reform (Finateros); (3) potential beneficiaries of the Peace Accords land program (tenedores); (4) farmers who own their land; and (5) farmers who rent their land. The last two groups, farmers and renters, represent a national cross-section sample that is broadly representative of all farmers in El Salvador. This survey was drawn from 50 municipalities scattered throughout El Salvador, a total of 1,161 individuals were interviewed.

One major conclusion derived from analysis of the survey data is that it supports many of the findings already derived from the MIPLAN survey reported in chapter 1. Most important among these is that both surveys coincide in the finding that half of all farms in El Salvador are rented. The 1993 Land Tenure Survey provides more precise information on farm size: farms overall average 2 mz.; owners average farms of 3.0 mz. and renters farms of 1.6 mz.

Chapter 1 has already established that both owners and renters can earn enough from their parcels to have incomes that compete with incomes from jobs in the industrial sector, but that it requires more rented land to do so. Landowners who have at least 1 mz. of land earn enough total income to be competitive with jobs in the industrial sector, whereas renters need to have 4 mz. or more to meet that standard. Thus the average farm owner in the 1993 Land Tenure Survey is in relatively good economic shape, whereas the average renter has less than the average amount of land needed to match income from an industrial job. These averages, however, can be misleading because of the small number of large farms in the surveys. When farms are grouped into cohorts according to size, we find that 64.2 percent of the farm owners have at least 1 mz. of land, whereas only 31.8 percent of renters have 1 mz. or more of land and 94.3 percent have less than 4 mz. This means that although renting itself is not a barrier to nationally competitive incomes, the amount of land to which most renters have access is too small to earn such incomes.

Most landowners have documents that prove their ownership, whereas renters normally work exclusively with oral agreements with the owners. Among those cooperative members who have opted for individual ownership of their land, few have land titles. One-third of landowners purchased their land, the remainder obtained it via inheritance or donation. Only a small fraction of owners were planning to sell their land. Farm owners have been on their land for an average of 13.2 years. Renters average 5.5 years, an indication that this is a relatively stable form of land tenure. Farmers paid an average of more than 16,000 colones for their farms, an average of 5,000 colones per mz. Renters paid an average of 279 colones per mz. per harvest. For every Salvadoran who rents out land there are approximately 23 who are renters.

Most farms in El Salvador are worked very intensively, with only 6 percent of the entire sample leaving any land idle. Renters and tenedores farm more intensively than owners.

Only 20 percent of owners and 5.5 percent of renters leave any of their land idle. One-third of Finateros report leaving an average of 14 percent of their land idle, compared with owners who left 9 percent idle, tenedores 3 percent, and renters 2 percent<sup>1</sup>. The larger the farm, the larger proportion left idle. A distinct minority of farmers left their land idle in order to let it recover its fertility, most left land idle because of insufficient inputs, lack of credit, or other reasons.

A majority of farmers in El Salvador, renters as well as owners, believe that forest land is disappearing and that the quality of farmland is decreasing. An overwhelming majority of all farmers would be willing to participate in a program to improve the environment.

Only about one-quarter of the farmers said that they were satisfied with their economic situation, but there were no major differences among the five categories of respondents. In terms of political alienation, the tenedor population is the most highly alienated. Only a tiny minority of farmers thought that fair trials were common in El Salvador, suggesting that if a new agrarian code is eventually passed, the new agrarian tribunals will have to work especially hard to overcome peasant distrust. Because more than one-third of the respondents lost a family member during the civil war, it is not surprising that high levels of political alienation exist in the countryside. Three-quarters of the tenedores lost a family member during the conflict, one reason these individuals are even more alienated than the average peasant.

Only 11 percent of all the farmers were females, and a lower proportion of ISTA cooperative members were females, an indication of selection bias for cooperative membership. The farmers interviewed were a mature group, averaging in their mid-forties. Education levels were quite low: 44 percent had no formal education, and 75 percent had three or fewer years. Much more will need to be done to increase education among rural El Salvadorans, especially if they are expected to be able to undertake skilled jobs in the industrial or service sector. Most farmers are very poor, and do not possess the capital goods that are common in urban areas (e.g., TVs). Tenedores are extremely poor even among this group of farmers: 90 percent live in homes with dirt floors, and 89 percent have no piped-in water.

A second part of this chapter explores the profitability of agricultural activity in El Salvador, particularly as a function of the type of land tenure. It then examines a series of questions about agricultural equipment, infrastructure, and practices that are often hypothesized to be influenced by landholding patterns.

The analysis shows that agricultural profitability is extremely low. Estimates indicate that in an average month, the average farmer will earn less from agriculture than will a temporary wage-laborer. Farm size must reach 3.2 mz. before net income from farming activities alone can generate monthly income equal to that of a salaried rural worker. Farmers who own their own land require less land, farmers who rent their land require more. These

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<sup>1</sup>These figures are based on farmer response and are therefore not a measure of overall land-use intensity in El Salvador, which would account for unoccupied lands as well.

conditions will inhibit rapid growth in agriculture and the development of rural consumer demand. Nevertheless, somewhat better profitability is found in crops that are infrequently grown in the Salvadoran countryside, particularly rice and vegetables. Taking these findings into account, future policy measures should address the lack of profitability seeking technological improvement in small farmer agriculture and by seeking ways to improve off-farm opportunities in rural areas.

Ownership of agricultural equipment and capital goods, and the use of technologically and ecologically sophisticated techniques generally occurs more frequently among those who own their land. Both renters and tenedores tend to show lower frequency of use on these measures.

The report concludes that the form of land tenancy, while it is a distinguishing characteristic in certain areas of agricultural performance, it is not the determinant variable of agricultural success or failure. Rather, farm size and cropping pattern and credit availability appear decisive. This finding is important to the design of future agricultural policies because it implies that engineering changes in landholding should not be a priority as they have been in the past.

The immediate policy implications of the findings in this section of the report are the urgent need to improve the expected profits in agriculture through measures such as increased technological sophistication and risk reduction through diversification, and the need to improve the contractual environment of land rental to promote higher value production through innovative crops and to encourage soil conservation. This chapter makes plain the fact that renting is a widespread, institutionalized form of land tenure. Agricultural and ecological planning must take into account the prevalence of rental tenancy in El Salvador if it is to be effective.

## 2.1 The 1993 Land Tenure Survey

In chapter 1 of this report the size of the landless, land poor, and unemployed population was estimated and its characteristics described. The size and nature of the landed population were also examined. We now know enough about both of these populations to begin a more exhaustive analysis of important subsets of that population. Despite the many strengths of the Multi-Purpose Household Survey (MPHS) data base utilized in chapter 1, it had a number of important limitations. First, the debt overhang problem could not be investigated with the MPHS because the survey contained no data on debt. Second, the amount of land held by each respondent to the survey was given as a range (e.g., 5-9 mz.) rather than as a specific amount. As a result an accurate estimate of key agricultural characteristics such as crop yields is not possible with such gross estimates of land size. Third, the survey did not contain codes that would have allowed the identification of some of the specialized populations of interest to the present investigation, especially Finateros and tenedores. Fourth, the MIPLAN sample

methodology underestimated the number of cooperative members.<sup>2</sup> Fifth, the survey contained no attitudinal information on the respondents, such as their satisfaction with life or their support for the political system. Sixth, the MPHS obtained agricultural income data for all crops combined and thus did not allow for the calculation of yields and profits for each individual crop. Seventh, the information on credit was limited to a few basic items and did not allow a detailed examination of credit use among farmers. Eighth, it provided very limited information on farm inputs. As a result of these and other limitations, it was decided to commission a special survey to fill in the gaps of the MPHS used in chapter 1.

This chapter examines the landed population of El Salvador in detail. It begins by describing the sample design, and then describes the major land tenure, socioeconomic, and demographic characteristics of the population. Finally, it reports on the agricultural production data. Chapter 3 examines the cooperative sector, incorporating data from the survey analyzed in this chapter, as well as much additional information. Chapter 4 examines the land market, once again drawing on the data set described in this chapter. The separate report on credit by Mark Wenner and the report on debt overhang by Carlos Benito also draw on this data set. Readers of those chapters and reports will want to refer back to this chapter to place those results within their corresponding context.

## 2.2 Sample Design

The design of this survey was complex because of the multifaced interests of the project. On one level, the study team was interested in data from a cross section of farmers in El Salvador. But at another level, there was interest in specific subgroups of the farmer population, each of which required their own sample frame. Specifically, there was interest in a sample of ISTA's agricultural cooperatives (Phase I of the 1980 land reform), a sample of beneficiaries of the FINATA program (Phase III of the 1980 land reform), and a sample of the largest group of beneficiaries of the 1992 Peace Accords, the *tenedores*.<sup>3</sup> For each of these populations, the study was focused on a common questionnaire designed to enable the researchers to obtain information on the farmer and his/her agricultural enterprises. In addition, however, to obtain information on the ISTA cooperatives as a unit, a separate questionnaire was developed and administered to the managers of each cooperative.

In light of these distinct and diverse interests of the researchers, the survey was designed with five self-contained domains of study. We call them "domains" rather than "strata"

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<sup>2</sup>As explained in chapter 1, because cooperative members live in narrowly circumscribed geographical areas and because they comprise such a small portion of the agricultural population, national probability samples are likely to result in underestimation.

<sup>3</sup>The other direct beneficiaries of the peace accords are the ex-combatants of the FMLN (7,500) and armed forces (15,000). While it would have been of interest to obtain data on these groups, at the time of the survey only a small proportion of them had already moved onto their assigned parcels, and few had actually begun to cultivate them. In the future, these individuals should be studied.

because each domain was designed as a free-standing unit drawn from distinct populations rather than as a separate stratum drawn from a single population. In this chapter, we report only on the farmer-level questionnaire. Chapter 3 reports on the questionnaire used to obtain data at the cooperative level. Each of the five domains of study is summarized in Table 2.1 below and then described in more detail in the section that follows.

**Table 2.1 Sample Design: The Five Domains of Study**

Domain of Study	Planned sample size	Number of farmer interviews	Number of cooperative-level interviews
# 1: "Abandoned" ISTA cooperatives	13 leaders	0	13
# 2: ISTA Cooperatives	200 + 20 leaders	221	20
# 3: FINATA beneficiaries	100	81	
# 4: Tenedores	100	109	
# 5: National Cross section	750	770	
<b>TOTAL</b>	<b>1,183</b>	<b>1,161</b>	<b>33</b>

### 2.2.1 Domain # 1: "Abandoned" ISTA Cooperatives

These settlements were identified by ISTA as abandoned or as having room for additional beneficiaries. The FMLN has approved these sites as acceptable places to locate their former combatants as well as some of the tenedores, the displaced population sympathetic to the FMLN. Only the leaders of the cooperatives were interviewed because the membership was very low or was in the process of being dramatically expanded as a result of the peace accords. The questionnaire utilized is contained in Appendix A of this chapter. The actual sample included interviews with the leaders of all thirteen abandoned settlements.

### 2.2.2 Domain # 2: 20 ISTA Cooperatives

ISTA has more than 350 settlements in the country, most of which date from the 1980 land reform. The 1991 Law # 747 ("Ley Jumbo") allowed the members of the settlement to choose among several forms of organization or to remain as they are. One form is the production cooperative, the form in which most of the farms were organized in 1980. The second is individual properties (i.e., subdivision of the coop into individual farms). The third is a mixed form (cooperatives and individuals). The fourth form is a shareholder arrangement ("participación real"). About 60 settlements have already made a choice. The sample was drawn from this list.

The design called for interviews with the managers and leadership of all twenty ISTA cooperatives using the same questionnaire applied to the abandoned settlements. The second questionnaire was to be administered to ten members of each cooperative selected at random (systematic selection) from the lists of the cooperative members. The questionnaire is contained in Appendix B of this chapter. Interviews were conducted on all of the twenty cooperatives selected. However, many of the cooperative members did not know which of the four categories their farm fell into. For the purpose of this chapter, all four subtypes of the cooperative domain have been grouped to form a single stratum in the sample. A total of 201 interviews were conducted.

### **2.2.3 Domain # 3: FINATA beneficiaries**

Phase III of the 1980 land reform (the "land-to-the-tiller" program) offered to sell to the former renters the land that they were working (up to a limit of 7 hectares). FINATA held the mortgages to these properties, some of which have been fully repaid, and also generated a computerized list of all beneficiaries of the program, giving their name, cantonal location, amount of the loan, and the amount paid back. One hundred "Finateros" were to be selected from lists provided by FUSADES. The list contained 33,393 names, organized by municipio and canton, but it did not provide the location of the farm, and thus individuals would have to be located one by one. To reduce costs, these 100 were selected in areas near interviews in the other domains, for convenience. In addition, clusters were allowed of up to five names per farm (some farms have only one beneficiary, some have as many as 30-40 beneficiaries). The questionnaire was the same one utilized for farmers in the other strata.

The survey team was unable to use the FINATA lists to locate the individual respondents. Although El Salvador is a small country, and addresses that specify the canton of residence of the Finatero would seem to be sufficiently specific to locate these individuals, it was not. The name of the village in which the Finatero lived would have been much more useful, but the computerized lists did not contain that information. As a result, the interviewers asked villagers where the Finateros were located and sought them out in their places of residence or on their farms. A total of 81 Finateros were eventually located in this fashion.

### **2.2.4 Domain # 4: Tenedores of the Peace Accords**

Because of the war, many farm owners abandoned their farms. Some of these farms have been occupied by peasants, many of whom are presumed to be sympathetic to the FMLN. Under the accords, 25,000 of these tenedores are to receive title to their land.

Determining the location of the tenedor population is problematic. Lists of tenedores were being developed by the FMLN at the same time this survey was being planned, but the early lists contained numerous duplicates and other anomalies. Given the difficulty locating the tenedores on these lists, the fieldwork was concentrated on locating tenedores in municipalities identified as conflictive zones.

A total of 40 municipios, most along the northern border, were not mapped by the Ministerio de Planificación because of the conflict and therefore did not fall into the MPHS data utilized in chapter 1 of this report. The survey team selected 7 of these 40 in order to sample 100 farms. In practice, it was possible to locate only 27 tenedores in these seven municipalities, and as a result the survey team utilized questioning of the local population to determine the whereabouts of the target population. A total of 109 interviews were conducted among tenedores.

### 2.2.5 Domain # 5: National Cross Section of Farmers

To obtain a picture of farmers not involved in the specialized groups listed above, it was decided to conduct a national sample of landed farmers in El Salvador. Resource limitations confined the sample size to 750. The original design called for dividing the sample into the three main agricultural cropping patterns of the country (coffee, former cotton land, and basic grains), but it was later decided, upon the advice of the contracted company, that such a neat subdivision was not practical because there was considerable intermixing of crops in all regions of the country. As a result, it was decided to utilize a national cross section, drawing the sample from a list (stratified by size) of all municipalities in the country (minus the municipalities in the greater San Salvador area). A total of 50 municipalities were selected. No more than 30 interviews per municipality were allowed to ensure maximum dispersion, and within each municipality, interviews were to be separated into at least two distinct cantones. In practice, the contractor exceeded this requirement, dividing the interviews into four cantones per municipality. Clusters of up to 5 interviews per cluster were allowed.

The location of the respondents were to have been based on the maps available from the Ministerio de Planificación. MIPLAN used the 1971 census maps, updated for the period 1987-1991, and showed each dwelling unit that was in existence at the time of the update.<sup>4</sup> In addition, the names of some of the families are written on the maps to help the interviewers in the field. Unfortunately, the subcontractor hired to conduct the fieldwork for the study was unable to obtain these maps and instead developed its own population counts within segments of each selected canton. A total of 770 interviews were completed in the national cross section.

Appendix C contains a full description of the sample design as provided by the subcontractor. At the end of that appendix, a list is given of the location of the interviews conducted for each stratum.

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<sup>4</sup>There is some confusion on this point since the 1971 census states (p. XIII) that such mapping was not prepared for the census. If not, then it is unclear how the 1971 census was actually conducted. See Ministerio de Economía, Dirección General de Estadística y Censos, *Tercer Censo Nacional Agropecuario, 1971*. San Salvador, October, 1974, Vol. I.

### 2.2.6 Renting as a Distinct Stratum in the Analysis

The initial intention was to analyze in this chapter four distinct domains, each corresponding to one of the four domains of study enumerated above to which the general questionnaire was applied. Hence, the plan was to compare: (1) ISTA cooperative members, (2) FINATA beneficiaries, (3) tenedores, and (4) the national cross section of farmers. But after reviewing the findings of the analysis of the MPHS described in chapter I of this report, and noting that approximately half of all of those who had access to land held it indirectly as renters or sharecroppers, it was decided to subdivide the national cross section into those who had direct access versus those who had indirect access to the land. As a result, it has been decided to add a fifth stratum—renters—to this analysis. The renter category includes both renters and sharecroppers.

In the absence of a recent national agricultural census, the MPHS data was the only national data available to the researchers to estimate the size of the renting population. Since the national cross section component of the sample being analyzed in this chapter is broadly representative of the agricultural sector in El Salvador, it is of interest to determine if renting is equally common in this sample.

To determine the prevalence of renting and sharecropping in the present data set, it is necessary to focus exclusively on the national cross section domain, because the sizes of the other domains (cooperatives, Finateros, and tenedores) were determined based on criteria other than their proportionate size in the national population. Specifically, independent of the proportion of farmers who are Finateros, ISTA cooperative members, or tenedores, the research team wanted to obtain a sample of each of these groups large enough so as to be able to make some generalizations about them. We had already learned from the MPHS that the cooperative members, living as they do in narrowly defined geographic areas, were likely to be underrepresented in a national probability sample. While the size of the Finatero population is presumably known with some degree of accuracy, the tenedor population has been defined on the basis of the logic of the peace accords negotiation rather than on the basis of any empirical estimates.

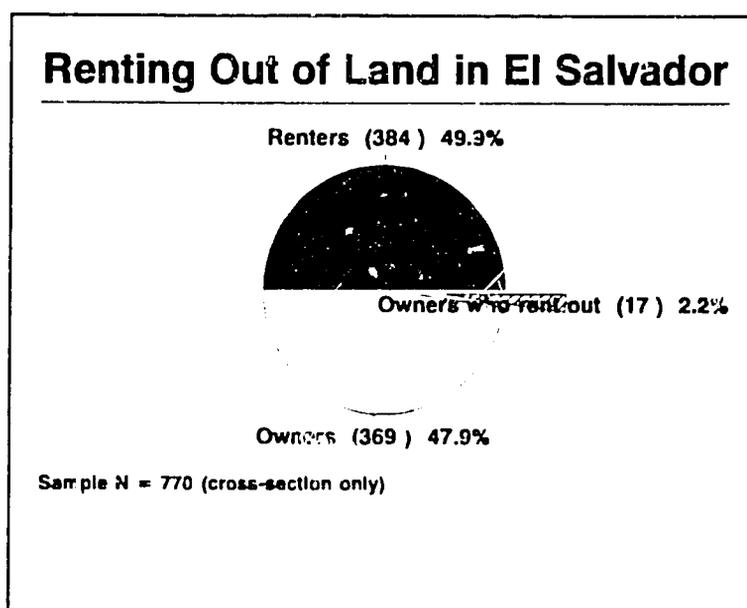
The national cross section produced the distribution of farms contained in Table 2.2. As can be seen, half of the cross section sample were found to be renters, a proportion virtually identical to the MPHS reported on in Chapter I. This increases our confidence that renters do in fact comprise about half of the farm units in El Salvador.

**Table 2.2 Direct versus Indirect Tenancy: National Cross-section Sample Only**

Strata	Percent	Number
Farmers	50.1	386
Renters	49.9	384
<b>TOTAL</b>	<b>100.0</b>	<b>770</b>

We can use the 1993 Land Tenure Survey data set to examine the source of the land that is being rented out. As shown in Figure 2.1 below, only 17 of 386 landowners rented out any land (taking into consideration only the largest parcel, and recalling that very few respondents possess more than one parcel). The figure shows the dramatic contrast between the proportion of the national cross-section sample who rented land versus those who rented it out; for every farmer who rents out land, there are 23 farmers who are renting land.

Income from rented land varies dramatically. One farmer received only 75 colones per year, another received 7,000 colones. The most frequent income mentioned was 300 colones, and half of all of those who rented out land earned between 300 and 500 colones per harvest from the rentals.



**Figure 2.1 Renting Out of Land in El Salvador**

## 2.3 Land Tenure Characteristics of the Sample

### 2.3.1 Amount of Land Possessed

Many studies of land tenure in El Salvador show that many landowners work more than one parcel of land. We asked the farmers how many parcels of land they owned, and learned that 91.4 percent had only one parcel, and 8.4 percent had two or more parcels. We recorded the farm size data for the two largest parcels only. Only two farmers in the survey had three parcels, and one had four. No farmer reported having more than four parcels. Thus, the limitation to the two largest parcels only excluded three parcels in the entire sample of 1,161 farmers.

The modal farm size across all five domains analyzed here is 1 mz. (0.7 hectares) and the mean is 2 mz. Figure 2.2 presents the mean farm size for each domain. Farm owners have significantly more land than those in other categories; Finateros have the second greatest average total land area.

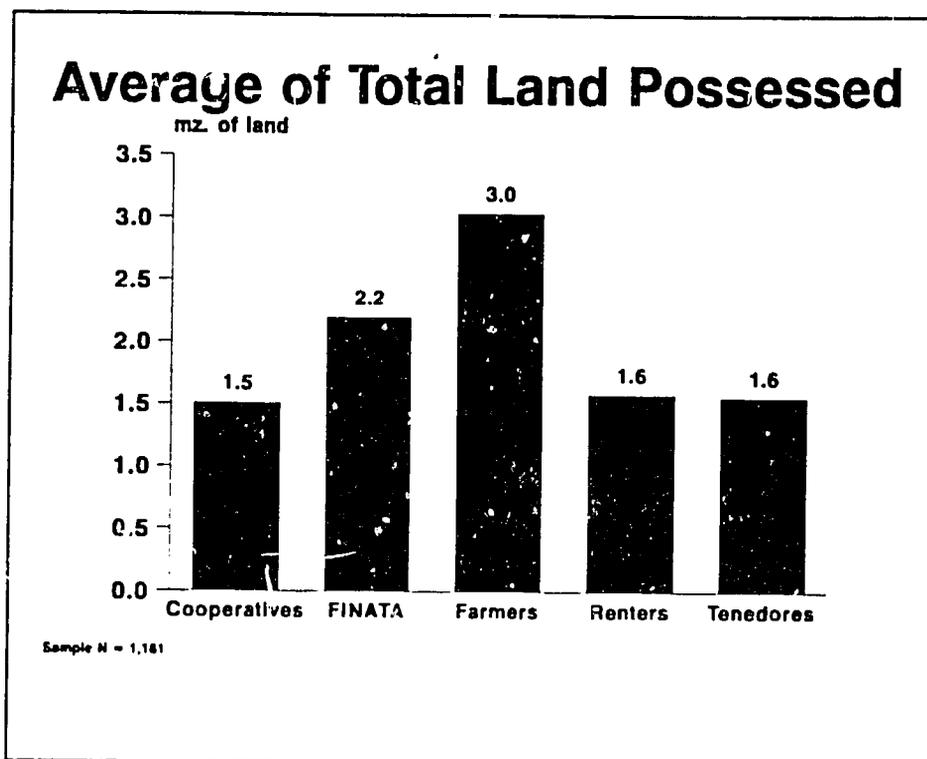


Figure 2.2 Average of Total Land Possessed

Another common way to look at land tenure is to create size cohorts and show what proportion of the total sample fits into each cohort. To allow for comparison with the MPHS data, we used the same size cohorts as MPHS. Panel A in Table 2.3 contains the results of the 1993 Land Tenure Survey collected for this project and panel B contains the results for the 1991-92 MPHS.

For both surveys the most common farm size was between 1 and 4.99 mz. Indeed, for each category of land tenure type except the colonato (in the MPHS), this was the modal category. As noted in the 1993 Land Tenure Survey, which contains ungrouped information on farm size, the mean farm size was 2 mz., whereas the assumed middle point of the 1-4.99 category would be 3 mz.

The MPHS has a consistently larger proportion of the sample in the 0.5-0.99 mz. category than does the 1993 Land Tenure Survey. However, it is difficult to interpret the significance of this finding because the ungrouped 1993 Land Tenure Survey data show that 26.4 percent of the entire sample had a total farm size of precisely 1 mz. Therefore, the cut-point of less than 1 mz. versus 1 mz. may have resulted in some farms in either study being misclassified in one category or the other (i.e., 0.5-0.99 or 1-4.99). The important point is that both studies found that the overwhelming number of farms ranged in size from slightly less than 1 mz. to slightly less than 5 mz.

In regard to large farms, the MPHS noted that 0.8 percent of the "fee simple" farms were 50 mz. or larger, whereas the largest farm in the 1993 Land Tenure Survey was 48 mz. If the same proportion of large farms in the MPHS had been found in the 1993 Land Tenure Survey, one would have expected the latter to have uncovered three such farms. With numbers as small as this, however, an "error" of 0.8 percent is well within the confidence limits of the sample and therefore does not reflect a problem with the samples.

In regard to land rented, neither survey detected any property larger than 50 mz. The MPHS did find a fractional percent of farms in the 20-49 mz. class, whereas the 1993 Land Tenure Survey found 0.5 percent of this size. Again, the numbers are well within the confidence intervals of the two surveys.

Given the remarkable consistency between the large sample of the MPHS and the small sample of the 1993 Land Tenure Survey, there is little reason to doubt, for example, that rented (and sharecropped) farms comprise about half of all the farms in El Salvador.

It was established in chapter 1 that both owners and renters can earn enough from their parcels to have incomes comparable to those earned in jobs in the industrial sector, but that it requires more rented land to do so. That is, landowners who have at least 1 mz. of land earn enough total income to be competitive with jobs in the industrial sector, whereas renters need to have 4 or more mz. to meet that standard. Thus the average farm owner in the 1993 Land Tenure Survey is in relatively good economic shape, whereas the renters fall below the average land needed to match income from an industrial job. These averages can be misleading,

**Table 2.3 Land Distribution by Tenure Type**

**Panel A: 1993 Land Tenure Survey**

Farm size (mz.)	Domains of Study									
	Cooperative		FINATA		Owner		Renter		Tenedor	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
< .5	21	42	4.9	4	27	105	24	92	10	11
.5-.99	3.5	7	8.6	7	8.8	34	7.8	30	2.8	3
1-4.99	75	150	81	66	50	192	65	249	85	93
5-9.99	.5	1	3.7	3	5.4	21	1.3	5	.0	0
10-19.99	.5	1	1.2	1	6.5	25	1.6	6	1.8	2
20-49	.0	0	.0	0	2.3	9	.5	2	.0	0
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>

**Panel B: 1991-92 MPHS**

Farm size (mz.)	Land Tenure Type													
	Fee simple		Free use		Rented		Promise of sale		Colonato		Cooperative		Sharecropped	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
0	.1	40	.0	0	.1	88	.0	0	.0	0	.0	0	.0	0
< .5	9.8	6,741	23.1	5,541	13.9	13,485	2.0	137	17.2	374	6.3	677	13.1	1,424
.5-.99	25.5	17,636	34.5	8,275	31.3	30,411	16.4	1,119	1,132	1,132	43.7	4,731	33.7	3,653
1-4.99	54.6	37,713	40.6	9,721	53.0	51,445	72.9	4,963	671	671	48.6	5,263	52.2	5,655
5-9.99	5.5	3,790	1.2	290	1.3	1,310	7.0	475	0	0	1.4	154	.9	100
10-19	2.2	1,526	.2	50	.3	288	.6	42	0	0	.0	0	.0	0
20-49	1.6	1,106	.4	84	.0	20	1.0	71	0	0	.0	0	.0	0
50+	.8	570	.0	0	.0	0	.0	0	0	0	.0	0	.0	0
<b>TOTAL</b>	<b>100.0</b>	<b>69,122</b>	<b>100.0</b>	<b>23,962</b>	<b>100.0</b>	<b>97,047</b>	<b>100.0</b>	<b>6,807</b>	<b>100.0</b>	<b>2,177</b>	<b>100.0</b>	<b>10,825</b>	<b>100.0</b>	<b>10,832</b>

however, because of the small number of large farms in the surveys. Grouping farms into size cohorts, we find that 64.2 percent of the farm owners have at least 1 mz. of land, only 31.8 percent of renters have 1 mz. or more of land, and 94.3 percent of renters have less than 4 mz. This means that, although renting itself is not a barrier to nationally competitive incomes, the amount of land to which most renters have access is too small to earn such incomes.

### 2.3.2 Security of Tenure

Land titles offer farmers security of tenure. Such security has important psychological value, granting peace of mind to the owners that their property cannot be taken from them, but more important, it allows them to use the land as collateral for loans. Although loans can be obtained from informal sources when titles are not available, most formal credit is conditioned on possession of a valid land title. Chapter 5 deals with the legal questions of land title in El Salvador.

In this chapter, we examine the prevalence of titles. Table 2.4 shows the distribution of various forms of documents among the five domains of study for the first (largest) parcel. Among renters, 92 percent report having no document for the parcel. The rent law that is currently in force (Decree No. 157 of March 27, 1979) requires (Article 10) that all renting agreements be formalized by either having an *escritura pública* or a *private notarized contract*. *The only exception is for rentals of up to 5 hectares, and those can utilize special documents prepared by the Ministry of Agriculture's Sección de Arrendamiento de Tierras Agrícolas.*

In marked contrast to the renters are the former renters, the Finateros. Only 6 percent of these farmers report having no documentation for their property, and all but 10 percent of the sample have a formal legal document; the 10 percent who do not only have provisional "receipts." It would appear that FINATA has been successful in providing land titles to its beneficiaries.

Of the 109 tenedores interviewed, only one had a document (in this case, a deed).

The farmers in cooperatives were very unlikely to have any documentation for their land. Less than 10 percent had a title, and 87 percent had no documents. It should be kept in mind that the land to which the survey refers is not the land of the cooperative itself, but only the individual parcel that is worked by the member. Because most of these parcels are part of the cooperative land, which would already be titled in the name of the cooperative, it is not surprising that the farmers do not have documents. Presumably in cases in which the cooperative members have opted for individual ownership, the prevalence of titles should be higher. An examination of the subset of cooperative members who have opted for individual ownership finds that 84 percent do not have titles, a proportion only slightly smaller than the cooperative sector as a whole. This finding suggests that some arrangement will need to be made on the cooperatives that have opted for individual ownership so that titles can be obtained.

Table 2.4 Land Documentation Held by those Working It: Largest Parcel Only

Type of document	Domain of Study									
	Cooperative		FINATA		Owner		Renter		Tenedor	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
Purchase-lease contract	1.7	5	13	10	1.6	6	.3	1	.0	0
Deed	.0	0	13	10	50	192	.3	1	.9	1
Notarized deed	.6	1	7.5	6	12	46	.3	1	.0	0
Title	9.4	17	38	30	.8	3	.3	1	.0	0
Receipts	1.7	3	10	8	.8	3	6.8	26	.0	0
Promise of sale	.0	0	1.3	1	.0	0	.0	0	.0	0
Acta of FINATA	.0	0	13	10	.0	0	.0	0	.0	0
Contract of sale	.0	0	.0	0	.0	0	.3	1	.0	0
Nothing	87	156	6.3	5	35	136	92	353	99	108
<b>TOTAL</b>	<b>100</b>	<b>180</b>	<b>100</b>	<b>80</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>

### 2.3.3 How Land was Obtained

Cooperative members obtained their land from ISTA, the Finateros from FINATA, and renters from other small and medium farmers. In this section we examine the manner in which the farm owners acquired their land. In Figure 2.3 below, it is shown that farmers acquire land in El Salvador via purchase, donations, and inheritance in almost equal proportions. This means that the land market accounts for approximately one-third of all of the land owned in the country.<sup>5</sup>

When asked if they were planning to sell their land, only twelve farmers responded affirmatively. More analysis of the land market appears in chapter 4 of this report. Suffice it to note here that the lack of interest in selling land probably helps to explain the high prevalence of renting in El Salvador.

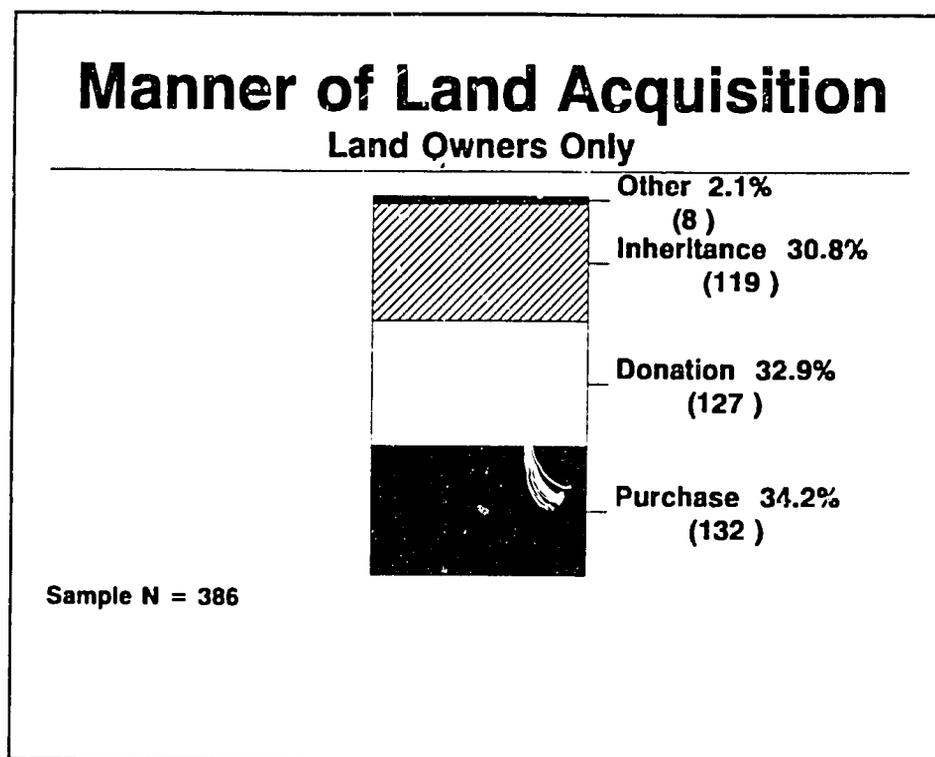


Figure 2.3 Manner of Land Acquisition

<sup>5</sup>Donations refer to gifts of land, usually from one family member to another.

### 2.3.4 Duration of Possession

Developing a successful farm enterprise takes many years. The land must be cleared, infrastructure must be installed, crop trials conducted, market links established, and so on. As shown in Figure 2.4 below, there is great variation in the time of possession among the five categories of farmers being analyzed in this study. Tenedores average about 3 years on their land, owners average 13 years. Perhaps the most important finding of this analysis of duration of ownership is that renters average 5.5 years on their land, indicating that it is a relatively stable form of tenure, although obviously much less so than ownership. The averages are deceiving, however, because 46 percent of the renters had access to their land for 2 years or less, and 60 percent had access for 3 years or less.

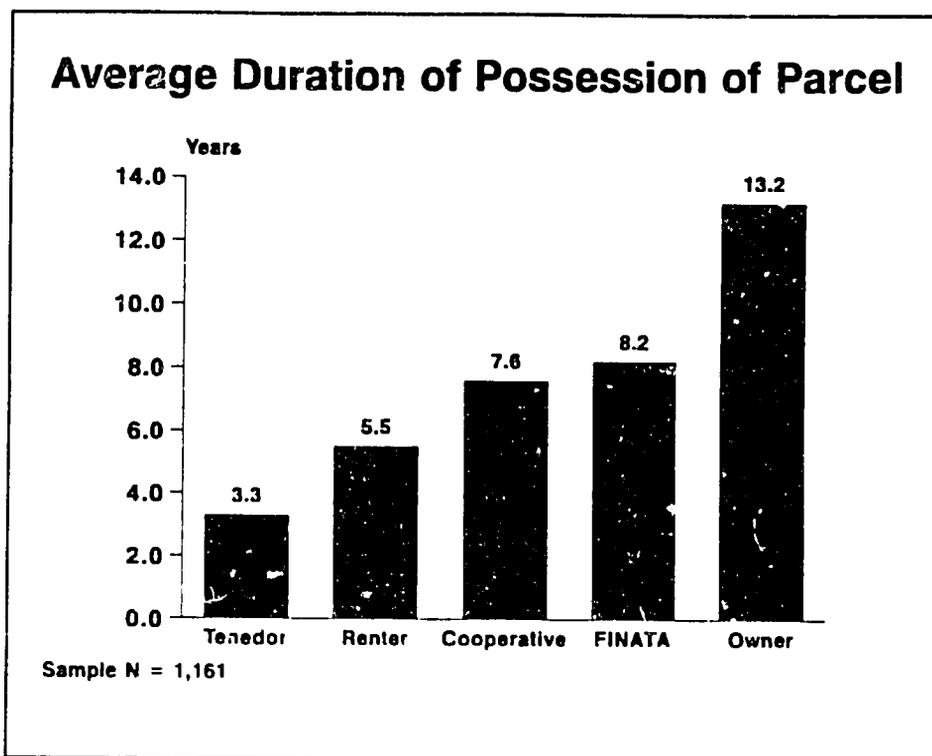


Figure 2.4 Average Duration of Possession of Parcel

### 2.3.5 Payment for Land

The price paid for farms in El Salvador varied dramatically with the type of land tenure. Landowners paid the most, paying twice as much as the Finateros, who in turn paid more than cooperative members (see Table 2.5). Renters on average paid per harvest only 2 percent of the purchase price paid by owners.

**Table 2.5 Price Paid for Purchase-Rental of Land**

	Stratus..							
	Coop		FINATA		Owner		Renter	
	(Valid N)	Mean	(Valid N)	Mean	(Valid N)	Mean	(Valid N)	Mean
How much paid for parcel?	(18)	6,472	(73)	8,901	(135)	16,312	(384)	374

The above figures are deceiving, however, because they do not take into consideration the price per mz. of land. As shown in Table 2.6, the cost per mz. drops to an average of around 5,000 colones for both owners and Finateros, but is lower for cooperative members (around 3,000 colones per mz.). Renters average only 279 colones per mz., or about 5 percent of the purchase price. These figures are averages and include farms bought many years ago as well as those purchased recently. Since we have already seen that owners and Finateros have owned their land, on average, for longer than the cooperative members, the lower price paid by the coop members indicates that in deflated terms their purchase price was even lower than the other two tenure types.

**Table 2.6 Price Paid Per Mz. for Purchase-Rental of Land**

	Domain of Study							
	Coop		FINATA		Owner		Renter	
	(Valid N)	Mean	(Valid N)	Mean	(Valid N)	Mean	(Valid N)	Mean
Price per mz.	(18)	3,195	(73)	5,051	(135)	5,432	(372)	279

#### 2.4 Intensity of Cultivation

There is much academic literature on land tenure and intensity of cultivation. Some researchers have shown that smaller plots are more intensively cultivated than larger plots. Others have argued that rented land is overcultivated. In El Salvador renters and tenedores, the two categories with the least secure tenancy, are also least likely to leave any of their land uncultivated (see Table 2.7). At the other extreme are the Finateros, one-third of whom leave at least some of their land uncultivated.

**Table 2.7 Uncultivated Land**

Left land idle?	Domain of Study									
	Cooperative		FINATA		Owner		Renter		Tenedor	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
Yes	13	24	33	26	20	77	5.5	21	7.3	8
No	87	156	68	54	80	309	95	363	93	101
<b>TOTAL</b>	<b>100</b>	<b>180</b>	<b>100</b>	<b>80</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>

The average proportion of land left idle for the entire sample was 6 percent. For each category of farmer analyzed in this chapter, the proportion of the land left idle coincides precisely with the data presented in Table 2.7 above. That is, the greater the percent of farmers in a given category who left some land idle, the greater the proportion of their farm they left idle. Finateros were not only most likely to leave some land idle, but the proportion of the land left unworked was the highest (14%). Owners left 9 percent of their land idle and cooperative members 6 percent. Tenedores and renters used almost all of their land (they left idle 3% and 2%, respectively). The difference between these percentages is statistically significant ( $< .001$ ), with the break coming between the renters and tenedores on the one hand, and the Finateros, owners, and cooperative members on the other.<sup>6</sup>

There is a clear relationship between size of farm and amount of land left idle; the more land owned, the more land left idle. The correlation (simple  $r$ ) between size of farm and amount left idle is .31 (significance  $< .001$ ). There is also a relationship between land tenure, amount of land held, and the proportion of land idle. Owners and Finateros hold more land than renters and tenedores, and therefore it is not surprising, given the correlation between amount of land and proportion left idle, that owners and Finateros have a higher proportion of their land left idle. But the relationship does not hold precisely. For example, Finateros hold less land than owners (an average of 2.2 mz. vs. 3 mz.), but Finateros have a considerably higher proportion of their land idle. Similarly, cooperative members, renters, and tenedores all have about the same amount of land (1.5 mz.), but cooperative members leave twice as large a percentage of their land idle.

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<sup>6</sup>These results are significant using an ANOVA design with a Duncan post hoc test for differences among the groups.

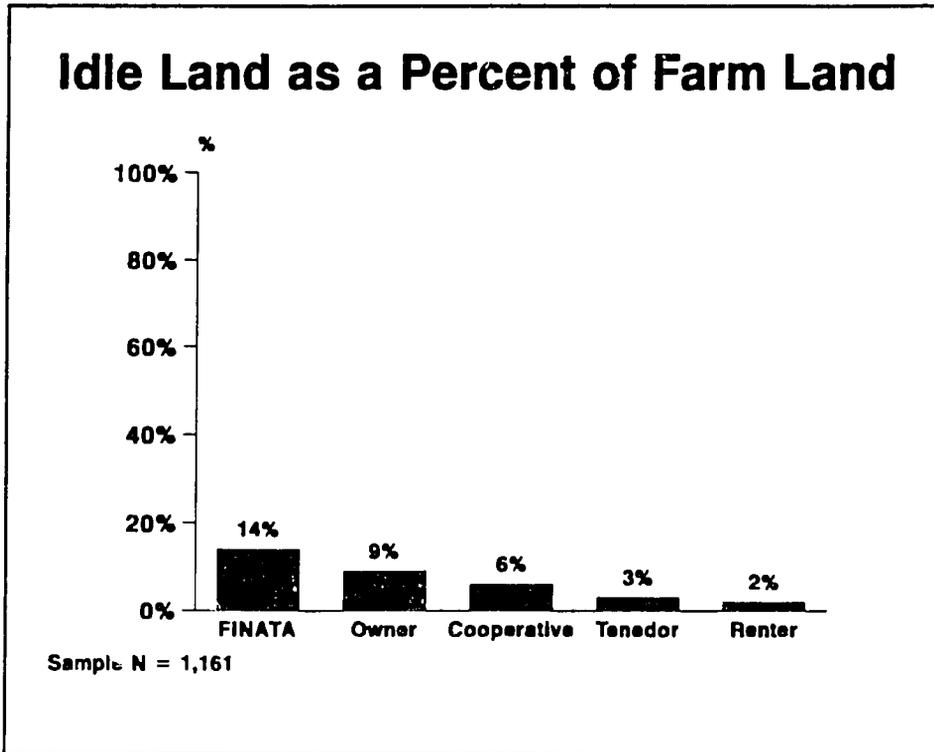


Figure 2.5 Idle Land as a Percent of Farm Land

Farmers gave a wide diversity of reasons for not farming all of their land (see Table 2.8). It is difficult to generalize from these responses because the size of the sample of those who left land idle represents only a small proportion of the entire sample. Among owners and renters, letting the land lie fallow to allow it to recover was the most common reason given. Among the cooperative members, a lack of credit was the most commonly mentioned factor. Among Finateros and, to a lesser extent, cooperative members, the most frequent explanation was that agriculture does not pay enough to warrant the effort required to raise a crop. The remaining reasons were scattered among a wide variety of factors from which it is difficult to draw any overall conclusion.

**Table 2.8 Reasons Why Land Left Idle**

Why did you leave some land idle?	Domain of Study									
	Cooperative		FINATA		Owner		Renter		Tenedor	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
Lack of Labor	.0	0	3.8	1	.0	0	5.0	1	.0	0
Lack of credit	38	9	12	3	7.8	6	.0	0	13	1
Lack of seed	.0	0	3.8	1	1.3	1	.0	0	.0	0
Lack of fertilizer	4.2	1	3.8	1	1.3	1	10	2	25	2
Lack of time	.0	0	.0	0	2.6	2	5.0	1	25	2
Afraid of violence	.0	0	.0	0	1.3	1	.0	0	.0	0
Let the fields recover	8.3	2	19	5	36	28	30	6	13	1
Ag does not pay	25	6	35	9	12	9	10	2	.0	0
Rented	4.2	1	.0	0	7.8	6	10	2	.0	0
Bad quality soil	4.2	1	3.8	1	3.9	3	20	4	25	2
Sickness	8.3	2	.0	0	1.3	1	.0	0	.0	0
Pasture	4.2	1	7.7	2	19	15	10	2	.0	0
Build a house	.0	0	3.8	1	1.3	1	.0	0	.0	0
Other	4.2	1	7.7	2	2.6	2	.0	0	.0	0
Don't know	.0	0	.0	0	1.3	1	5.0	1	.0	0
<b>TOTAL</b>	<b>100</b>	<b>24</b>	<b>100</b>	<b>26</b>	<b>100</b>	<b>77</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>8</b>

## 2.5 Attitudes Toward the Environment

Throughout the developing nations there is increasing concern over the impact of farming practices on the environment. In El Salvador the heavy use of pesticides in the 1960s and 1970s in the cotton-growing lowland areas served to raise environmental consciousness in the country. Today the GOES as well as many international donors are targeting the environment as a concern. What is the level of environmental concern among the five categories of Salvadoran farmers interviewed for this study?

There is a clear division of concern between air and water on the one hand, and forest and farmland on the other. Air quality tends to be an urban problem and an urban concern and thus only about 10 percent of the respondents in each of the categories thought that air quality was deteriorating. Water quality, however, is both an urban and rural concern. About one-third

of the owners, cooperative members, Finateros, and renters thought that water quality was deteriorating (see Table 2.9). Approximately two-thirds of the tenedores seemed especially concerned over the quality of water, which may reflect problems specific to the areas sampled.

Slightly more than half of the farmers thought that the forests were deteriorating, but no one group had significantly greater concerns in this area than any other. The same pattern emerged on the quality of farmland; about half of the farmers in each category thought that it was getting worse.

It is clear from this review that about half of the farmers have concerns over the quality of their immediate environment (the forest and the farmland), but that no one category of farmer seems more concerned than any other. Those who suggest that renters, for example, are more abusive of the soil than owners may be correct, but the level of environmental concern among renters is no different from that of owners.

It is encouraging to note that more than four-fifths of all the farmers were willing to participate in an environmental program. Among the tenedores, 91 percent were willing to do so. One can assume that programs designed to teach conservation practices will be well received among Salvadoran farmers.

## **2.6 Community Problems, Life Satisfaction and Political Support-Alienation**

### **2.6.1 Community Problems**

We wanted to determine the major communal concerns of the farmers. We found that there was a wide variety, as shown in Table 2.10. Potable water was the one community problem that was mentioned with considerable frequency among owners, renters, and tenedores. The remaining community problems were dispersed quite broadly over the entire list.

### **2.6.2 Life Satisfaction**

Merely because a farmer is able to identify community problems does not mean that he/she is discontented with life. We asked farmers if they were satisfied with their economic situation in general and if they were satisfied with their housing. Table 2.11 shows the results. For the sample as a whole, only 27 percent said that they were either somewhat or very satisfied with their economic situation. In contrast, nearly half were satisfied with their housing. Among the categories analyzed in this study, the cooperative members and the small farmers were more likely to be satisfied with their economic situation, whereas the FINATA beneficiaries were the least satisfied. These differences are statistically significant.

In terms of housing, the tenedor population stands out; about three-quarters are dissatisfied with their housing, compared with approximately half of the remaining farmers. This finding is not surprising given that the tenedores have spent less time on their properties than those in other farmer groups.

**Table 2.9 Attitudes Toward the Environment**

	Domain of Study									
	Cooperative		FINATA		Owner		Renter		Tenedor	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
<b>The air we breathe</b>										
Good	63	127	51	41	61	237	60	231	68	74
Same	24	49	27	22	26	101	31	118	23	25
Worse	11	23	21	17	12	45	8.6	33	9.2	10
DK	1.0	2	1.2	1	.8	3	.5	2	.0	0
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>The water</b>										
Good	47	94	54	44	52	200	45	173	22	24
Same	17	35	14	11	19	75	22	85	11	12
Worse	34	69	30	24	28	110	33	125	67	73
DK	1.5	3	2.5	2	.3	1	.3	1	.0	0
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>The forest</b>										
Good	18	36	15	12	23	90	16	61	26	28
Same	23	46	22	18	25	96	36	137	29	32
Worse	58	117	60	49	51	198	48	186	45	49
DK	1.0	2	2.5	2	.5	2	.0	0	.0	0
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>The farmland</b>										
Good	28	56	23	19	32	123	26	99	43	47
Same	19	38	22	18	26	99	22	85	14	15
Worse	53	107	53	43	42	164	52	200	43	47
DK	.0	0	1.2	1	.0	0	.0	0	.0	0
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>Would you participate in an environment program?</b>										
Yes	88	177	86	70	87	335	84	324	91	99
No	6.5	13	6.2	5	8.0	31	8.1	31	2.8	3
NR	5.5	11	7.4	6	5.2	20	7.6	29	6.4	7
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>

**Table 2.10 Major Community Problem Perceived**

	Domain of Study									
	Cooperative		FINATA		Owner		Renter		Tenedor	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
<b>Most serious communal problem</b>										
Cost of living	9.0	18	9.9	8	9.3	36	8.6	33	7.3	8
Unemployment	8.5	17	8.6	7	7.0	27	6.3	24	3.7	4
Low wages	9.5	19	6.2	5	2.3	9	1.6	6	.9	1
Poor crop	1.0	2	1.2	1	2.1	8	1.0	4	2.8	3
Land scarcity	3.0	6	2.5	2	7.8	30	15	59	2.8	3
Education	2.0	4	1.2	1	.8	3	.3	1	1.8	2
Housing	4.5	9	1.2	1	1.3	5	.5	2	8.3	9
Malnutrition	3.5	7	.0	0	1.8	7	1.3	5	6.4	7
Potable water	17.0	35	8.6	7	21	82	27	103	31	34
Organization	.5	1	2.5	2	.3	1	.3	1	3.7	4
War	.0	0	.0	0	.0	0	.3	1	.0	0
Crime	1.0	2	3.7	3	1.3	5	.8	3	.0	0
Pollution	.0	0	.0	0	.5	2	.0	0	.9	1
Transport	7.5	15	14	11	11	43	9.6	37	14	15
Crop disease	6.5	13	8.6	7	9.6	37	8.6	33	.0	0
Lack of TA	.5	1	.0	0	1.0	4	.8	3	.0	0
Lack inputs	9.0	18	25	20	14	53	14	55	6.4	7
Electricity	4.0	8	2.5	2	2.6	10	1.0	4	.0	0
Credit	4.0	8	1.2	1	.0	0	.5	2	.9	1
Floods	4.5	9	1.2	1	.0	0	.0	0	4.6	5
Cost inputs	1.0	2	1.2	1	1.3	5	.5	2	.0	0
Land conflict	1.0	2	.0	0	.0	0	.0	0	.9	1
Telephones	.0	0	.0	0	.3	1	.0	0	.0	0
Latrines	.0	0	.0	0	.3	1	.8	3	.9	1
Ag. machinery	.0	0	.0	0	.0	0	.0	0	1.8	2
DK	2.5	5	1.2	1	4.4	17	.8	3	.9	1
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>

92

**Table 2.11 Life Satisfaction**

	Domain of Study									
	Cooperative		FINATA		Owner		Renter		Tenedor	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
<b>Satisfaction with economic situation</b>										
Very unsatisfied	24	49	23	19	25	97	29	110	47	51
Somewhat unsatisfied	29	58	38	31	29	111	30	117	27	29
Indifferent	16	33	19	15	17	67	16	62	3.7	4
Somewhat satisfied	21	43	17	14	21	81	19	74	19	21
Very satisfied	9.0	18	2.5	2	7.8	30	5.5	21	3.7	4
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>Satisfaction with house</b>										
Very unsatisfied	12	24	7.4	6	11	42	10	39	44	48
Somewhat unsatisfied	20	41	37	30	20	76	25	97	25	27
Indifferent	15	31	9.9	8	17	65	13	51	5.5	6
Somewhat satisfied	31	62	31	25	27	105	32	121	14	15
Very satisfied	21	43	15	12	25	98	20	76	12	13
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>

### 2.6.3 Political Support-Alienation

El Salvador has recently emerged from a protracted civil war. Many observers have seen the agrarian question as a key cause of the war. Our study attempted to take a brief look at the question of political alienation to determine if there were differences among the groups under study. In Table 2.12 are the results from an abbreviated version of the "Political Support-Alienation Scale" that has been used in Europe, the United States, and in every country in Central America (except Belize). A recent report on the use of this scale in an urban sample in El Salvador is contained in a study by Seligson and Córdova.<sup>1</sup>

<sup>1</sup>Mitchell A. Seligson and Ricardo Córdova Macías, *Perspectivas para una democracia estable en El Salvador*. San Salvador: Instituto de Estudios Latinoamericanos (IDELA), 1992.

87

**Table 2.12 Political Support-Alienation**

	Domain of Study									
	Cooperative		FINATA		Owner		Renter		Tenedor	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
<b>Pride in being Salvadoran</b>										
Almost always.....	95	190	89	72	95	366	92	355	94	103
At times.....	5.0	10	9.9	8	4.9	19	6.0	23	2.8	3
Almost never.....	.5	1	.0	0	.3	1	1.3	5	1.8	2
DK.....	.0	0	1.2	1	.0	0	.3	1	.9	1
TOTAL.....	100	201	100	81	100	386	100	384	100	109
<b>Should you support the system</b>										
Almost always.....	42	84	38	31	37	144	34	132	27	29
At times.....	41	82	38	31	41	160	42	162	33	36
Almost never.....	7.0	14	4.9	4	10	39	10	39	29	32
DK.....	10	21	19	15	11	43	13	51	11	12
TOTAL.....	100	201	100	81	100	386	100	384	100	109
<b>Human rights respected</b>										
Almost always.....	26	53	23	19	25	96	25	97	18	20
At times.....	54	108	54	44	53	205	53	203	51	56
Almost never.....	14	28	14	11	17	66	16	61	27	29
DK.....	6.0	12	8.6	7	4.9	19	6.0	23	3.7	4
TOTAL.....	100	201	100	81	100	386	100	384	100	109
<b>Trust in the army</b>										
Almost always.....	38	76	28	23	29	111	28	107	3.7	4
At times.....	41	82	54	44	45	174	49	187	23	25
Almost never.....	15	30	11	9	19	75	17	64	69	75
DK.....	6.5	13	6.2	5	6.7	26	6.8	26	4.6	5
TOTAL.....	100	201	100	81	100	386	100	384	100	109
<b>Trust in the legislature</b>										
Almost always.....	24	49	19	15	21	81	19	73	13	14
At times.....	41	82	37	30	31	121	32	123	26	28
Almost never.....	10	20	12	10	16	60	13	51	42	46
DK.....	25	50	32	26	32	124	36	137	19	21
TOTAL.....	100	201	100	81	100	386	100	384	100	109
<b>Trust in the institutions of government</b>										
Almost always.....	15	30	17	14	21	80	20	78	6.4	7
At times.....	58	117	52	42	49	191	49	188	31	34
Almost never.....	17	35	23	19	19	73	21	80	57	62
DK.....	9.5	19	7.4	6	11	42	9.9	38	5.5	6
TOTAL.....	100	201	100	81	100	386	100	384	100	109
<b>Courts grant fair trails</b>										
Almost always.....	6.0	12	6.2	5	6.2	24	4.4	17	3.7	4
At times.....	48	96	43	35	46	178	49	189	32	35
Almost never.....	32	65	33	27	29	112	24	93	50	54
DK.....	14	28	17	14	19	72	22	85	15	16
TOTAL.....	100	201	100	81	100	386	100	384	100	109

84

Almost all respondents were proud to be Salvadoran, but this was a very general item that tapped feelings of nationalism. The remaining items show much higher levels of political alienation. Of the entire sample, 41 percent thought that one should always support the Salvadoran system of government, while 11 percent thought that this should almost never be done. It is interesting to note that cooperative members and Finateros were the least likely to express a negative response to this item. At the other extreme, four times as many tenedores do not think that the system should be supported.

Only one-quarter of the farmers believe that human rights are almost always respected in El Salvador, and 18 percent said that they were almost never respected. Once again, the tenedor population stands out, showing considerably less support for the system. A bit more than one-quarter of the farmers have a lot of trust in the Salvadoran army, while a slightly lower proportion have no trust in it. Of the tenedor population, 69 percent say they almost never trust the army. The distribution of responses for trust in the legislature parallels trust in the army for the sample as a whole and for the tenedor group, although the negative response for the latter is not as extreme (42%).

When asked about trust in the institutions of government in El Salvador, there was a larger negative response than positive response. Once again, the tenedor population stands apart, with more than half expressing political alienation.

Salvadoran farmers are more skeptical of the court system than of any other political institution included in the survey. Only 7 percent stated that a fair trial could be obtained almost always, compared with 37 percent who believed that such a trial would occur almost never. The tenedor population is more negative about the courts than are the other categories of farmers, but the difference is not as extreme as in the other questions because of the lower level of trust in the courts by the sample as a whole.

There are many potential explanations for the level of alienation found among farmers. One major factor is likely to be the extent to which the farmer population suffered as a result of the civil war. The survey found that 39 percent of the sample reported losing a family member during the war, 31 percent had one or more family members seeking refuge during the war, and 14 percent had a family member (including themselves) who was forced to leave the country during the war. Correlation of these consequences of the war with the measures of political support-alienation resulted in a clear pattern of significant correlations; those who had suffered during the war were more likely to be politically alienated. Table 2.13 below shows that the consequences were most severe for the tenedores; three-quarters of them lost a family member during the war and three-quarters sought refuge during the war. Cooperative members seem to have suffered less during the war, but this may be because they joined the cooperatives after the initial violence directed at the cooperatives had subsided.

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**Table 2.13 Consequences of the War for El Salvador's Farmers**

	Domain of Study									
	Cooperative		FINATA		Owner		Renter		Tenedor	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
<b>Lost a family member in war</b>										
Yes	27	55	40	32	34	131	39	148	75	82
No	73	146	60	49	66	255	61	234	23	25
DK	.0	0	.0	0	.0	0	.5	2	1.8	2
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>Had to seek refuge during war</b>										
Yes	22	44	31	25	21	82	35	133	74	81
No	78	157	68	55	79	304	65	250	24	26
DK	.0	0	1.2	1	.0	0	.3	1	1.8	2
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>War caused migration to another country</b>										
Yes	10	21	12	10	16	61	12	45	26	28
No	89	179	88	71	84	323	87	335	72	79
DK	.5	1	.0	0	.5	2	1.0	4	1.8	2
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>

## 2.7 Socioeconomic and Demographic Characteristics of the Farmers

Who are the Salvadoran farmers interviewed for this study? What are their demographic characteristics, how well off are they? This section provides a review of this basic data.

Most farmers in El Salvador are males (see Table 2.14) and the 1993 Land Tenure Survey sample produced a similar breakdown. In our sample, 11 percent were females. Only the cooperative group had a considerably lower proportion of females, which may be a function of the ISTA selection process, where females are not granted equal consideration with males. This could be a significant issue for ISTA to address. The MIPLAN survey discussed in chapter 1 also found that 5 percent of the cooperative members were females.<sup>2</sup>

Table 2.14 Gender

Sex of interviewee	Domain of Study									
	Cooperative		FINATA		Owner		Renter		Tenedor	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
Male	95	190	90	73	86	332	89	342	89	97
Females	5.5	11	9.9	8	14	54	11	42	11	12
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>

The farmers, as a group, were quite mature (see Table 2.15). Only 20 percent of the sample is 30 years of age and younger, and only 41 percent is 40 and younger. The owners and Finateros are significantly ( $<.001$ ) older than the other groups, but even the tenedores, with the fewest years of occupancy on their land, average 43 years of age. It is worth pointing out that the average age of the farmers with employees in the MIPLAN study was 49, and that of farmers without employees 47, another instance where the 1993 Land Tenure Survey and MIPLAN studies coincide.

<sup>2</sup>The MIPLAN survey, however, reports an overall lower proportion of females among those with access to land. For example, it finds that 7 percent of the farmers and 4 percent of the renters are females. It is not clear why this lower proportion is found among the MIPLAN survey.

27

**Table 2.15 Mean Age of Farmers**

Age	Domain of Study				
	Cooperative	FINATA	Owner	Renter	Tenedor
(Valid N)	(201)	(81)	(386)	(384)	(109)
Mean	41.8	47.9	48.8	44.5	43.1

Most of the farmers in the study were poorly educated. Forty-four percent had no formal education, and 75 percent had three or fewer years of schooling. Table 2.16 shows the mean education for each farmer group in the study. The tenedores and renters are less educated than the other groups, but the differences are not statistically significant. The MPHS found that the average number of years of school for the farmer/employer group was 2.5 years, for farmers without employees 1.4 years.

**Table 2.16 Mean Years of Education of the Farmers**

Education	Domain of Study				
	Cooperative	FINATA	Owner	Renter	Tenedor
(Valid N)	(201)	(81)	(386)	(384)	(109)
Mean	2.4	2.6	2.2	2.0	1.7

Although we will be measuring the income of the farmers in a more precise manner in the second section of this report, it is also important to measure wealth, a product of the long-term accumulation of income. To do this we restrict ourselves to looking at the appliances in the farmers' homes and the condition of their housing. While these indicators do not measure all wealth, they do incorporate most of the items that the majority of farmers are likely to own in the way of capital assets other than the inputs used on the farm itself (tractors, etc.), which are examined in the section on agricultural inputs found below in this report. We realize that wealth also includes bank accounts, stocks, and other such savings, but we do not include these in our study because very few Salvadoran farmers would be willing to reveal such savings.

In Table 2.17 is a list of appliances and the percentage of farmers in each category who possess them. The tenedor population stands out as the poorest of the five groups of farmers. For each of the appliances, except telephones and washing machines, there is a statistically significant difference (ANOVA  $F < .001$ , with Duncan post hoc test) between the tenedores and the four other groups. With the exception of radios, which are owned by half of the tenedores, only a small percentage of the tenedores own any of the appliances included in the study.

Radios are owned by about three-quarters of the other farmers in the study. The remaining four groups are not readily distinguishable from each other, with the exception of the landowners, who have slightly more TVs and refrigerators.

Housing conditions also varied among the five groups (see Table 2.18). Once again, the tenedor group was found to be much poorer than the other four groups, with the differences being statistically significant in every case (ANOVA  $< .001$ , Duncan post hoc test). For example, 90 percent of the tenedores live in houses with dirt floors, compared with only 58 percent of the farm owners. It is of note that renters have a higher proportion of dirt floors (71%) than any other group (except the tenedores), but the difference is not significant. The contrast on the other variables is even more dramatic. Tenedores are without electric lighting in 94 percent of the cases, compared with 50 percent or less of the other groups. Eighty-nine percent of the tenedores do not have piped-in water and 78 percent do not have plumbing of any sort, whereas 64 percent of owners do not have piped-in water and 20 percent do not have any plumbing. Once again renters proved to be somewhat poorer than the remaining groups on these two variables. Finally, tenedores are most likely to be living in wattle and daub houses (*bahareque*), whereas all of the other farmer groups are most likely to be living in adobe homes.

A final indication of poverty and wealth is the proportion of farmers who live in houses with only one room. In such houses parents and children share the same room as a bedroom (as well as a kitchen). Table 2.19 below shows that tenedores once again differentiate themselves from the other groups (significance  $< .001$ ), with more than two-thirds living in one-room houses. The only surprising finding in this table was that 45 percent of the cooperative members lived in one-room houses.

**Table 2.17 Ownership of Appliances**

	Domain of Study									
	Cooperative		FINATA		Owner		Renter		Tenedor	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
<b>B&amp;W TV</b>										
Yes	33	66	25	20	34	133	26	98	3.7	4
No	67	135	75	61	66	253	74	286	96	105
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>Color TV</b>										
Yes	2.5	5	9.9	8	15	59	7.6	29	.0	0
No	98	196	90	73	85	327	92	355	100	109
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>Refrigerator</b>										
Yes	7.5	15	7.4	6	17	65	7.3	28	.0	0
No	93	186	93	75	83	321	93	356	100	109
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>Telephone</b>										
Yes	.5	1	.0	0	1.0	4	.5	2	.9	1
No	100	200	100	81	99	382	99	382	99	108
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>Radio</b>										
Yes	73	147	73	59	79	304	72	276	51	56
No	27	54	27	22	21	82	28	108	49	53
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>Bicycle</b>										
Yes	26	52	16	13	14	53	7.6	29	3.7	4
No	74	149	84	68	86	333	92	355	96	105
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>Washer</b>										
Yes	.5	1	.0	0	.3	1	.0	0	.9	1
No	100	200	100	81	100	385	100	384	99	108
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>

**Table 2.18 Housing Conditions of Farmers Surveyed**

	Domain of Study									
	Cooperative		FINATA		Owner		Renter		Tenedor	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
<b>Floor of house</b>										
Dirt	63	126	69	56	58	225	71	272	90	98
Wood/ cement	37	75	31	25	42	161	29	112	10	11
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>Electric lights</b>										
No	51	103	51	41	38	148	48	184	94	102
Yes	49	98	49	40	62	238	52	200	6.4	7
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>Piped-in water</b>										
No	73	147	52	42	64	246	70	267	89	97
Yes	27	54	48	39	36	140	30	117	11	12
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>Plumbing</b>										
None	30	61	14	11	20	77	34	131	78	85
Latrine	69	138	85	69	76	292	65	250	22	24
Plumbing	1.0	2	1.2	1	4.4	17	.8	3	.0	0
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>
<b>Construction material of house</b>										
Cardboard	1.0	2	.0	0	.3	1	1.3	5	3.7	4
Wattle and daub	19	39	19	15	18	71	24	92	64	70
Unfinished wood	5.5	11	2.5	2	6.7	26	3.1	12	8.3	9
Adobe	40	80	57	46	48	184	54	206	15	16
Finished wood	1.5	3	.0	0	.8	3	1.8	7	.9	1
Concrete or block or brick	33	66	22	18	26	101	16	62	8.3	9
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>

**Table 2.19 Proportion of Farmers with One-room Houses**

Number of rooms	Domain of Study									
	Cooperative		FINATA		Owner		Renter		Tenedor	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
One room	45	91	33	27	26	101	38	146	68	74
Two or more	55	110	67	54	74	285	62	238	32	35
<b>TOTAL</b>	<b>100</b>	<b>201</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>386</b>	<b>100</b>	<b>384</b>	<b>100</b>	<b>109</b>

## 2.8 Agricultural Production and Income

This section deals with questions of agricultural profitability at 1991 and 1992 price levels. It shows that agricultural net incomes tend to be low for all the tenure classification types and that, at the farm sizes and cropping regimes that predominate in the sample, expected net income from agricultural activity is below national average incomes. The section goes on to show that the ownership of capital goods and the employment of specific agricultural practices are not generally affected by tenure classification, except in the important case of soil conservation.

Corn is the predominant crop grown according to the 1992 Land Tenure Survey's farmers, with more than 94 percent reporting some area planted to corn. Sorghum (30.7%) and beans (27.3%), which are commonly grown in association with corn, are the second and third most frequent crops encountered in the sample. Eleven percent of the interviewed farmers also raise some vegetable or fruit crop, most commonly sesame. Only 5.7 percent of the sample cultivates rice, slightly more than the 2.9 percent who cultivate coffee.

These percentages generally are maintained within each of the tenure classifications, with the exception of coffee, where 82 percent of the farmers reporting coffee cultivation own their own parcels. This is not surprising because coffee is a permanent crop, and it is far more likely to be planted on owned parcels than on rented ones.

Crop yields were obtained for the entire 1992 crop year (Table 2.20), which may include up to three harvests for corn, although a single harvest is most common. These yield figures are therefore not directly comparable to most data sources on Salvadoran agricultural production, which report yields on a per harvest basis. Nevertheless the yields can be used to compare across tenure classifications. The tenedor category performs notably below the other tenure classes in corn yields, a finding that helps explain the far poorer economic conditions found among this group in part 1 of this chapter. Statistical comparison of the group mean values shows that the corn yields of the tenedor group are significantly lower than those of all

other groups at the .05 confidence level. In the case of beans, owners' yields show a statistically significant advantage over the renter group. In rice, the relationship is reversed, with the renters' average yields significantly higher than those of owners at the .05 confidence level. This last result, however, appears statistically suspect with a very high standard deviation, a small N and a physical average completely out of line with production practices.

**Table 2.20 Staple crop yields by sample classification (quintals/mz.)**

	Domain of Study				
	Coop	FINATA	Owner	Renter	Tenedores
<b>CORN</b>					
Mean	49.6	40.1	44.6	44.5	27.0
St. Dev.	36.94	28.56	42.83	36.17	27.66
N	176	80	356	377	109
<b>BEANS</b>					
Mean	13.8	10.5	26.3	13.6	4.5
St. Dev.	12.15	11.52	63.19	17.98	6.69
N	39	31	126	116	5
<b>RICE</b>					
Mean	80.5	69.0	51.0	209.4	100.2
St. Dev.	35.95	52.66	45.26	357.52	269.29
N	18	7	18	13	10
<b>SORGHUM</b>					
Mean	28.0	26.0	23.3	25.1	20.7
St. Dev.	44.48	20.59	18.83	34.07	55.20
N	59	26	99	146	26

Estimating net income from agricultural activity is methodologically tricky, especially in farmer response surveys. Table 2.21 presents average net incomes per mz. from agricultural activities from the 1993 Land Tenure Survey. The surprising and statistically significant (.05 level) higher per mz. income figure from FINATA properties is not explained by higher

per mz. income from any particular crop or by a greater level of diversification. These observations may lead to the conclusion that the FINATA sector is somehow planting a mixture of crops with fewer losses than the other tenure classifications. The high standard deviation for the FINATA net income, however, also suggests that anomalous observations are heavily weighing the mean, and the result must be considered suspect. The other results, however, seem quite plausible and starkly portray the low profitability of agriculture in general in El Salvador.

**Table 2.21 Agricultural production net income (all crops) by sample classification**

Net agricultural income/mz.	Domain of Study				
	Coop	FINATA	Owner	Renter	Tenedores
Mean	207.4	1,91	332.2	357.0	64.2
St. Dev.	258.29	15175.80	2209.45	1943.15	193.99
N	179	81	378	379	109

To present the most reliable picture of overall agricultural net income, controlling for farm size, the MIPLAN survey was judged more comprehensive than the 1992 Land Tenure Survey primarily because of its larger sample size. Net agricultural income from all crops during the principal harvest of 1991 is recorded with a market value imputed to home consumption by the farmer. The figure was made even more imprecise because the respondent was allowed to define the operating costs. Some may have included land rental or other costs that were not included by others. The general definition of net income given by the survey, however, is "sales + consumption - production costs." In any case, the MIPLAN data tend to show agricultural income figures that are significantly higher than those revealed by the 1992 Land Tenure Survey. Because different methods were used to generate the two sets of figures, however, they are not directly comparable and it is thus impossible to pinpoint the reason for the discrepancy. The income figures reported in the MIPLAN data are higher than those from the 1992 Land Tenure Survey, and they will be used with the caveat that these other data suggest they may err toward overreporting of net income.

Controlling for size, ordinary least squares estimations of net agricultural income as a function of cultivated area reveal two central results (Table 2.23).<sup>3</sup> First, predicted profitability at the average cultivated parcel size of 2.64 mz. was 2,562 colones per harvest, or a monthly equivalent (assuming two harvests per year) of 427 colones, which means that the average farm owner's agricultural income alone places him about 100 colones per month below temporary agricultural wage earner's monthly mean income levels (see Figure 1.13 in chapter 1).

Table 2.22 depicts the predicted monthly incomes from agricultural activity for the upper limits of the size strata for which general income data was presented in chapter 1. Looked at slightly differently the regression equation predicts that agricultural monthly income equals a permanent agricultural worker's income at a parcel size of approximately 5.2 mz.

**Table 2.22 Predicted Monthly Agricultural Income by Land Size**

Upper limit of size strata:	Predicted monthly ag. income:
0.5 mz.	20 colones
1.0	136
4.0	811
9.0	1,877.5
19	2,367
49	8,908

A second estimation, with dummy variables for tenure classification reveals a statistically significant, economically important observation that renters, on average, tend to have slightly lower profitability than other tenure types, with an estimated income of 460 colones per month. Owners of the same size parcel would be predicted to earn 544 colones per month under this specification.

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<sup>3</sup> Both a linear and a quadratic term were included in the regression. This specification was used based on the shape of the total income curve as a function of landholding presented in chapter 1 and on the hypothesis that there is an interval of increasing monetary returns to farm size because of scale non-neutrality in credit access, technical assistance, and marketing. The significance of the coefficients and the relatively robust *r*-square indicate that the specification is adequate, especially considering that no control whatsoever for land quality was made.

95

**Table 2.23 Net Agricultural Income as a Function of Area Planted**

Dependent Variable: Net monthly agricultural income					
R Square	.34513				
Variable	B	SE B	Beta	T	Sig T
AREA2	-1.503273	.056249	-.646466	-26.725	.0000
AREA	232.751577	5.485086	1.026431	42.434	.0000
(Constant)	-95.560942	20.659874		-4.625	.0000
where: AREA = Mz.s of cultivate land on farm 'i' AREA2 = area square  Net monthly agricultural income as a function of area cultivated and tenure classification.					
Dependent Variable: Net monthly agricultural income					
R Square	.34513				
Variable	B	SE B	Beta	T	Sig T
CCOP	-64.885446	2.450788	-.009769	-.702	.4828
AREA2	-1.397511	.063407	-.544695	-22.040	.0000
RENTER	-83.051251	37.928721	-.030623	-2.190	.0286
AREA	230.000391	5.941202	.959468	38.713	.0000
(Constant)	-53.820734	30.384377		-1.771	.0766
where: CCOP = dummy variable for tenancy on a cooperative RENTER = dummy variable for rental tenancy					

The MIPLAN data do not provide information, however, on the profitability of specific crops. The 1993 Land Tenure Survey indicates, unsurprisingly, that rice, coffee, and a variety of vegetable and fruit crops generate returns well above those attainable from the typical corn system. Where corn generated an average of 1,238 colones per mz. of net income, rice averaged 8,004, beans 2,355, and fruit and vegetable crops 5,334. A simple correlation coefficient of .147 was found between the number of different crops grown and the per mz. profitability of the farm. One of the obvious challenges for Salvadoran agriculture would seem to be how to promote a wider use of these more profitable, but also more difficult and often riskier, crops.

While income from agricultural production appears to be somewhat below national averages for the farm sizes that predominate in the sample, this income is augmented to a certain degree by wage labor performed off the farm. The mean annual income from the 1993 Land Tenure Survey's measure of off-farm wages are recorded in Table 2.24.

**Table 2.24 Income from Off-parcel Activities by Sample Classification**

Income from off-farm activities	Domain of Study						
	Collectivo	Individual	Mixto	FINATA	Owner	Renter	Tenedores
Mean	2,638.7	3,555.4	4,423.4	1,776.7	2,560.4	2,300.7	2,015.6
St. Dev.	1747.9	3159.6	1642.9	2109.8	2693.4	2498.1	2016.1
(N)	11	103	22	32	123	158	42

It is often hypothesized that more secure forms of tenure are associated with a greater propensity to capital accumulation and investment. The 1993 Land Tenure Study measured several categories of wealth and capital among the different tenure classifications. The results show a statistically significant difference (.05 level) in the frequency of beef cattle ownership between private owners and all other tenure classes except cooperatives, with owners incurring the higher frequency. Dairy stock were also found to have a significantly greater frequency within the owner class than for any other classification. Table 2.25 presents data on cattle ownership according to tenure classification and Table 2.26 presents similar data on the frequency of a variety of infrastructural improvements and capital goods. The slightly higher percentage of cattle owners among the farm owners is as expected. It is important to note, however, that it is impossible to distinguish from cross-sectional data whether property owners are those who a priori are better endowed with resources, or whether more secure tenancy has facilitated their accumulation of wealth.

The frequency with which infrastructural and capital goods were reported reveals several statistically significant differences among the tenure classifications (Table 2.26). The owner group showed higher frequencies of fencing and pickup truck ownership than all other categories. Owners and Finateros both had higher frequencies of grain storage facilities and work animals than the other categories.

Despite the statistical differences noted in the frequencies of ownership of these goods, the overall picture is one of low levels of improvement and investment on the small farms. Although private owners and Finateros appear to be slightly better capitalized in some areas such as fences, trucks, and work animals, in general these frequencies indicate that farmers in El Salvador are working with low levels of technology and infrastructure.

07

**Table 2.25 Frequency of Cattle and Dairy Ownership by Tenure Classification**

	Domain of Study									
	Coop		FINATA		Owner		Renter		Tenedores	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
<b>Raise beef cows</b>										
No	92.8	167	96.3	78	88.9	343	96.1	369	95.4	104
Yes	7.2	13	3.7	3	11.1	43	3.9	15	4.6	5
<b>Raise dairy cows</b>										
No	95.6	172	96.3	78	86.5	334	94.0	361	98.2	107
Yes	4.4	8	3.7	3	13.5	52	6.0	23	1.8	2

The frequency with which technologically advanced agricultural practices are used is another area in which differences among tenure classifications are sometimes hypothesized. The 1993 Land Tenure Survey (Table 2.27) reveals that there are statistical differences among the tenure classifications. FINATA landholders, cooperative members, and private owners all have higher frequency use of hybrid seed and treated seed than do renters or tenedores. All tenure classes have a higher incidence of fertilizer, insecticide, and fungicide use than the tenedores.

Another important area in which there appears to be some difference across groups is that of soil conservation practices (Table 2.28). As would be expected, private landowners appear to use measures such as windbreaks, natural fertilizer, and resting land at higher frequencies than cooperative members, renters, or tenedores. The mean frequencies of these three variables showed statistically significant differences between owners and the renter and tenedor groups. With respect to the fallow land variable, both the FINATA group and the private owner group were significantly higher than the renters and the tenedores. It is important to note that the only measure for which a statistically significant difference was encountered between owners and cooperatives was the use of manure fertilizer. In general the key differences appear to be between fee simple ownership and rental or occupation, not between fee simple ownership and cooperative tenure.

Given the ecological threat to the Salvadoran resource base by intensive agriculture and population pressure, these differences, although somewhat small quantitatively, may have major consequences. These results suggest that it is important for policies to put special emphasis on soil conservation measures for land held indirectly.

95

**Table 2.26 Capital Goods by Sample Classification**

	Domain of Study									
	Coop		FINATA		Owner		Renter		Tejedores	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
<b>Fences</b>										
No	46.1	83	37.0	30	2	86	35.4	136	48.6	53
Yes	53.9	97	63.0	51	77.7	300	64.6	248	51.4	56
<b>Store house</b>										
No	47.8	86	33.3	27	42.7	165	46.6	179	71.6	78
Yes	52.2	94	66.7	54	57.3	221	53.4	205	28.4	31
<b>Irrigation</b>										
No	95.0	171	96.3	78	96.6	373	98.2	377	100.0	109
Yes	5.0	9	3.7	3	3.4	13	1.8	7	.0	0
<b>Sprayer</b>										
No	59.4	107	37.0	30	42.5	164	44.8	172	55.0	60
Yes	40.6	73	63.0	51	57.5	222	55.2	212	45.0	49
<b>Irrigation sprayer</b>										
No	93.9	169	91.4	74	91.2	352	91.4	351	96.3	105
Yes	6.1	11	8.6	7	8.8	34	8.6	33	3.7	4
<b>Tractor</b>										
No	98.9	178	98.8	80	98.7	381	98.7	379	100.0	109
Yes	1.1	2	1.2	1	1.3	5	1.3	5	.0	0
<b>Pickup truck</b>										
No	99.4	179	100.0	81	95.3	368	98.4	378	100.0	109
Yes	.6	1	.0	0	4.7	18	1.6	6	.0	0
<b>Work animals</b>										
No	87.8	158	71.6	58	74.9	289	87.2	335	94.5	103
Yes	12.2	22	28.4	23	25.1	97	12.8	49	5.5	6

99

**Table 2.27 Agricultural Practices by Sample Classification**

	Domain of Study									
	Coop		FINATA		Owner		Renter		Tenedores	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
<b>Improved seeds</b>										
No	27.2	49	24.7	20	37.0	143	45.6	175	37.6	41
Yes	72.8	131	75.3	61	63.0	243	54.4	209	62.4	68
<b>Treated seed</b>										
No	33.9	61	46.9	38	32.6	126	26.3	101	44.0	48
Yes	66.1	119	53.1	43	67.4	260	73.7	283	56.0	61
<b>Fertilizer</b>										
No	2.2	4	3.7	3	1.6	6	1.8	7	8.3	9
Yes	97.8	176	96.3	78	98.4	380	98.2	377	91.7	100
<b>Insecticide</b>										
No	10.0	18	19.8	16	16.1	62	16.1	62	24.8	27
Yes	90.0	162	80.2	65	83.9	324	83.9	322	75.2	82
<b>Fungicides</b>										
No	68.9	124	71.6	58	66.6	257	73.2	281	84.4	92
Yes	31.1	56	28.4	23	33.4	129	26.8	103	15.6	17
<b>Herbicides</b>										
No	28.9	52	17.3	14	25.6	99	28.4	109	35.8	39
Yes	71.1	128	82.7	67	74.4	287	71.6	275	64.2	70

100

**Table 2.28 Soil Conservation Practices by Sample Classification**

	Domain of Study									
	Coop		FINATA		Owner		Renter		Tenedores	
	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)
<b>Windbreaks</b>										
No	72.2	130	50.6	41	56.2	217	64.6	248	86.2	94
Yes	27.8	50	49.4	40	43.8	169	35.4	136	13.8	15
<b>Low till cultivation</b>										
No	36.7	66	25.9	21	27.2	105	24.7	95	37.6	41
Yes	63.3	114	74.1	60	72.8	281	75.3	289	62.4	68
<b>Mulch (natural fertilizer)</b>										
No	90.0	162	80.2	65	70.7	273	88.0	338	94.5	103
Yes	10.0	18	19.8	16	29.3	113	12.0	46	5.5	6
<b>Fallow Land</b>										
No	88.9	160	67.9	55	75.6	292	88.3	339	87.2	95
Yes	11.1	20	32.1	26	24.4	94	11.7	45	12.8	14

101

## **2.9 Conclusions and Policy Recommendations**

The purpose of making comparisons across tenure types for a wide variety of economic and social variables is to evaluate the impact of government interventions in the land market (specifically the ISTA and FINATA programs) vis-à-vis landholding patterns that have remained outside such intervention and a form of occupancy which owes much to the disruption of the civil war (the tenedores). The most general conclusion is that the form of tenancy cannot be considered a decisive variable in terms of either social or economic indicators. This is an important finding, which informs policymakers more about what not to do than about which specific course to follow, basically indicating that putting large public investment into land tenure reform may have enormous benefits from the perspective of sociopolitical stability, but it has done little at the aggregate level in terms of raising living standards or agricultural production above levels found in privately owned or rented lands. On the other hand, the total lack of government attention, as seen in the case of the tenedores, seems to be accompanied by extremely low living standards and investment in agriculture.

What then, should policy response to the current land tenure situation look like in the next five or ten years? The data presented in chapter 1 and in this chapter indicate that these years will be, by necessity, a transitional period for El Salvador, in which the development model based on agricultural exports will be replaced by one that stresses the country's comparative advantage with respect to labor. The role for agriculture in this period will therefore be to feed the country, preserve the quality of soil and water resources in the country, generate foreign exchange for investment, and educate and maintain the workforce, which will be increasingly absorbed into other sectors of the economy. The findings of this report should help end the ideologically charged debate about collective versus individual tenure and allow policy proceed with more pressing matters.

These matters are:

1. Targeting small farmers for technical assistance and ecological programs to increase agricultural profitability and sustainability. Both data sets point out the overwhelming proportion of farmers who work less than 5 mz. of land. Extension programs must be developed that access this stratum and that also take into account the low levels of formal education of Salvadoran farmers. Such programs are currently under development by both the Ministry of Agriculture (with World Bank funds) and by farmers organizations. It is important to note, however, that this analysis has tended to look at yields and crop selection as causes of low profitability. Internal terms of trade are also a factor. Exchange rate policies and the internal distribution system for agricultural inputs and products should also be examined in tandem with extension efforts.
2. Putting additional emphasis on rural education. The rural children of today will need more than the three or four years of schooling that their parents had if they are to become the industrial workforce of the next century.

3. Encouraging rural job creation through expansion of artisanal activity and small business development.
4. Permitting a wide variety of tenure forms to exist. Rental, rent-to-own, mixed cooperative/individual ownership, and condominium ownership should all be given equal legal opportunity to exist, and should not be hampered by the government. The persistence of rental and collective arrangements indicates that these tenure forms fill needs in the rural environment. Options should be clearly defined, however. Many ISTA cooperative members had difficulty explaining the government's "new options" when asked. The coordinate-based property registry system currently operating under the aegis of the Instituto de Libertad y Progreso should be expanded as a politically neutral entity to manage records of all tenure types (see chapter 5 on the ILP).
5. Targeting the tenedor population for special transitional assistance to formalize property rights and stabilize production. This effort is already ongoing through the Land Bank and the national reconstruction plan, but the data indicate that this is a very needy population that may need additional help to stabilize itself.

### 3. AGRARIAN REFORMS IN EL SALVADOR: A CONTEMPORARY ASSESSMENT

1. Beneficiaries of land reform in El Salvador occupy about one-fifth of the farmland of the country and represent roughly 10 percent of the country's population.

2. The reformed sector uses the land somewhat more intensively than the non-reformed sector, but differences are not marked, and 1991-92 data on cooperatives show a more extensive enterprise pattern than for 1990-91. There is considerable room for producing more sustainably on the cooperatives—farmland that should be planted is now left idle, land that should be improved or planted to crops is allowed to remain in natural pasture, and little potential to irrigate land in the dry season is used.

3. Resources on cooperatives are not used optimally partially because of the unprofitability of farming and the difficulty of obtaining production credit. The fact that some cooperatives do well economically despite a negative macroeconomic climate, however, indicates that factors endogenous to some cooperatives are also important in determining success or failure.

4. Yields of cane, corn, and rice are higher per unit of land on cooperatives than the national average, but land quality is also somewhat better; coffee yields stand at the national average.

5. A sample survey of 18 operating land reform cooperatives shows extreme variability in economic performance. Those cooperatives that provide adequate income to their members have a more diversified enterprise pattern or an ample acreage of perennial crops per member, or both. The cooperatives that perform most poorly depend on basic grains.

6. Most of the sampled cooperatives would be able to meet a mortgage payment were one required in the year of study, but if one-third of the defaulted production credit were to be refunded at the same time, six would be unable to do so.

7. Failure to pay off production credit is a serious problem, and many cooperatives that were deeply in debt when all production credit was exonerated in mid-1990 are again in default.

8. The "abandoned" cooperatives, that is, those in the ex-conflict zone, are also defaulting, and this past-due debt may be a deterrent to adding the new membership called for in the peace accords. Other problems with filling the peace-accords membership mandate are: neither ex-combatants nor *tenedores* from other parts of the country are welcomed by those who occupied the property during the war, ex-soldiers may not wish to become farmers, the settlers' place of origin may be far from the land allocations, and the properties selected may have no housing or other necessary infrastructure.

9. Choices under the "new options" program of ISTA will result in more members having individual titles to plots of land. However, many working with a viable collective enterprise wish to retain it; they are opting for a mixed system of land tenure, with house plots to be titled individually.

10. Selecting an "equity shares" institutional option allows members who wish to exit the organization to do so with some resources. The problem is that few cooperatives have the cash on hand to redeem the shares, and prospective purchasing *campesinos* are in a similar situation. This will effectively drive the market value of shares well below par. Unless this problem is addressed prior to "selling" this option to too many *campesinos*, shareholding members will ultimately feel frustrated and deceived.

11. A major problem with the individualization option is that smallholders traditionally plant corn, which usually results in mere "subsistence." A major effort to diversify production on cooperatives and cropping patterns on parcels is in order. Because a ready package of alternative crops is not as available in El Salvador as in other Central American countries, more adaptive plant and animal research is needed.

12. Many cooperatives have large pools of underemployed labor, a condition that would be ameliorated by a more diversified farm-enterprise pattern.

13. Many cooperatives have not begun to pay for the land that they have occupied virtually free-of-charge since 1980. Inflation has eroded the original mortgage payments dramatically. ISTA is about to institute a further reduction, which will cut still more from the current mortgage bills of those cooperatives that accept the new options program.

14. About 3.3 percent of ISTA's original total mortgage debt has been paid by the cooperatives. This compares with about 20 percent in the case of FINATA. ISTA's administrative costs per beneficiary family are much larger than FINATA's.

15. New links between ISTA and CENTA should be forged to diversify farm enterprises, and the institution of fiscal responsibility on the cooperatives is of utmost importance. Parcel-holding members who default on individual land payments for reasons within their control should have their land titles taken by the cooperative, and the land should be rented to another *campesino*, whose rental payments should be applied to the unpaid debt. Cooperatives that default should rent out land to nonmember *campesinos*, whose rental payments will help to meet the cooperative's debt. Alternatively, cooperatives might be compelled to take on new members who would be fiscally responsible, or defaulting cooperatives might be forced by the government to allow a state-hired technician to make decisions until the enterprise again becomes solvent, as during the days of *co-gestión*.

16. The cooperatives need to give more thought to both economic and environmental sustainability than they have in the past.

17. Although there are still lessons to learn from the unfolding experience with agrarian reform, the government should stop subsidizing the reformed sector and should turn its support to obtaining credit and technical assistance for recipients of land under the peace accords and the large numbers of landless and near-landless in El Salvador.

### 3.1 Introduction

Families who benefited from El Salvador's land reform in the early 1980s work more than one-fifth of the country's farmland, some of it the richest in the nation. Before obtaining their property rights, these *campesinos*, who make up about 10 percent of the country's population, were renters of tiny plots and wage laborers on large farms.

Thirteen years have passed since land reform began in El Salvador. During that time a bitter civil war was fought, largely but not exclusively focused on the issue of land hunger. Peace brought with it an agreement that 12,500 ex-combatants on both sides and 25,000 *tenedores* (roughly translated as "squatters"), whose work fed and supported (mainly) the insurgents, would obtain land. The state would buy some of this property from willing sellers. Other ex-combatants and *tenedores* would be settled on land reform cooperatives in the former battle zones that were partially or wholly abandoned by their original settlers during the war and that the conflict's end would again open to farming.

As most issues are reassessed at watershed periods, the end of the war gives one the opportunity to examine El Salvador's land reform once again. Did good fortune come to the beneficiaries as the optimists promised with the advent of the reform? Or was the productive capacity of the country severely compromised as the pessimists forecast? The answers lie somewhere between the extremes. Accordingly, this chapter will: (1) describe the reforms, (2) assess the present economic condition of the beneficiaries, (3) discuss some remaining and serious financial problems, and (4) suggest policy changes.

### 3.2 Arguments Presented

The argument this chapter presents is that agrarian reform cooperatives use the land at their disposal somewhat more intensively than the private sector, but not as well as the country requires. It documents that there is a large amount of underemployment on some cooperatives and, by presenting income data from a sample survey, demonstrates that cooperatives with the most diverse farming programs and those with perennial crops (coffee, sugarcane, and bananas) perform best economically, provided they have large enough tracts planted. Those cooperatives that depend heavily on basic grains (corn, sorghum, rice, and beans) do poorly. Since future plans call for some of the cooperatives to be parcelized, whether these farms revert to mere subsistence farming is a concern. In El Salvador, basic grains are grown primarily on small farms, while perennial crops, usually destined for export, are grown on larger ones and on the collective sector of agrarian reform cooperatives. In addition to being important from an income standpoint, the introduction of a more diverse enterprise pattern on cooperatives would generate more productive employment.

This chapter also documents the debt problem on cooperatives, concluding that after the exoneration of production credit in 1990, cooperatives began to default once again. Only 3.3 percent of the mortgage debt has been paid by cooperatives, even though real land and interest payments decreased markedly in the inflation of the 1980s and early 1990s. Presently, this land debt is being reduced once again, this time by a program called "new options"; as the initiative is accepted, it is anticipated that the already eroded mortgage-debt payments will be halved. Thus, it has been at a substantial financial cost to the country that production per unit of land on cooperatives is somewhat greater than the national average and that members realize higher incomes than the remainder of *campesinos* in El Salvador. This study finds that the land reform cooperative members have been subsidized more heavily than any other group in rural poverty over the years and suggests that El Salvador's government now turn its attention to other and larger needy groups in the countryside.

### 3.3 Background to the Reform

In the decree that established the agrarian reform, the government was empowered to expropriate all farms that exceeded 500 hectares in size. From March through May 1980, 472 farms were taken. Some landlords kept legally permitted reserves of 100 to 150 hectares (the size depended on soil capacity); many did not.

Landowners were to be reimbursed with bonds, mainly at a 6-percent rate of interest and at the values they had declared for 1976 and 1977 property taxes. Landlords have been using these bonds to pay taxes over the war years.<sup>1</sup> Strasma (1989) reports that in the haste with which the reform was accomplished, 238 of these pieces of land—half of the properties seized—belonged to owners who did not possess more than 500 hectares, a matter that ultimately forced the government to pay market price for the land in order to avoid a successful appeal to the courts by the landowners. As these cases languished, the land was farmed by beneficiary *campesinos*.

Since the post-reform pattern under which the land was to be operated was that of a production cooperative, the farm was not divided, but was to be operated as a single enterprise much as it was before reform. The cooperative organization provided that work would be done in common under the direction of campesino-elected officers and a state-provided manager (co-gestor), who would have veto power over the cooperative's board of directors (*junta directiva*) on major farm decisions. In 1990, the co-gestor was replaced by a *facilitador* who

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<sup>1</sup> The bonds had maturities of 7, 20, 25, and 30 years. Most paid 6-% interest, but some paid more, some less. Maturity and interest rate depended on the type of land use and the reason for expropriation. Annual interest coupons could be used in payment of any taxes if the government had failed to provide funds to the Central Bank with which to pay the interest; the same was true of bonds not paid upon maturity. As a result, although the government did not provide funds for prompt payment of most of these bonds and interest, it did wind up paying them indirectly when they were presented as payment for taxes. The bonds were fully negotiable, and traded mostly at about 40-60% of nominal value.

had less power and was to be concerned with the reorganization priorities—"new options"—of the reform that became a paramount program emphasis at the beginning of the 1990s.

The takeover of the country's largest farms and their conversion into production cooperatives occurred in what came to be known as Phase I of the agrarian reform. Two other stages were to complete the reform in El Salvador. Phase II was to extend the same process as in Phase I to persons holding 100 to 500 hectares, but it was immediately postponed. Phase III was a land-to-the-tiller law that would allow campesino tenants who farmed up to 7 hectares of land to file a claim for legal title to the plot they rented. A major criticism of Phase I came from landlords who felt that the cooperatives did not use the land as rationally as they had and produced lower yields. Other detractors criticized the cumbersome bureaucracy required to service land recipients with credit and technical assistance, while supporters of the Phase I organization felt that channeling inputs to some 36,000 newly land-enfranchised independent farm families in the absence of a production cooperative would be too daunting a task ever to accomplish.

Another problem was that a major "free-rider" problem occurred in the Phase I cooperatives. For each day that a cooperative member worked on the collective enterprise, s/he would be paid a wage by the institution that lent the cooperative its production credit. This "wage advance" against future earnings was then subtracted from the cooperative's gross income as an operating cost. After the farm's profit was calculated at harvest time, a member's share would be determined by dividing it by the days s/he worked after subtractions had been made for investment needs of the cooperative and sometimes social programs. Thus the system separated monetary reward from work accomplished and diluted the incentive to work at capacity. Members were tempted to "free ride." Why work hard when the same monetary reward could be obtained by slacking off?<sup>2</sup>

Furthermore, because the government co-gestor had veto power over major crop and other farming decisions, members often saw themselves as state farm workers, not as partners in a cooperative enterprise. In theory, they were supposed to pay for the land and get dividends at year-end if the cooperative cleared profits greater than needed to make the land payment.

Since no penalty was imposed on cooperatives that failed to repay all of their production credit or honor their land payments, members routinely voted to increase their current welfare. Vacations, wages during off-season, cooperative-paid clinics, on-farm schools, and other benefits were sometimes charged as farming expenses. Thus many, if not most, of the cooperatives operated at a bookkeeping loss despite reasonably good land and yields.

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<sup>2</sup> An argument is sometimes made that peer pressure keeps members working on production cooperatives that are exceptionally well organized. In cases where dividends are actually paid, members may see some correspondence between effort and reward.

The Alfredo Cristiani government, which took office in 1989, began to insist on stricter standards of cost accounting. In addition, Cristiani was committed to making El Salvador a country of individual landholders, his goal, enunciated frequently, being: *Hacer un país de propietarios*. As a result, policy on the cooperative sector began to shift to the encouragement of more individual farming. Decree No. 747, passed in 1991, provided that in exchange for lower mortgage payments, cooperatives would be expected to choose their form of land tenure: collective, individual, mixed, or redeemable share.

Some of these changes were foreshadowed in a paper in which Strasma (1990) addresses the continuing debt situation of land reform beneficiaries and suggests that the Phase I cooperatives (administered by the *Instituto Salvadoreño de Transformación Agraria*, ISTA) could be reorganized and the debt problem confronted, but that for financial obligations to be treated seriously by beneficiaries, sanctions for nonpayment are needed. Strasma also argues that part of the problem is that some of the cooperatives are too large and impersonal and need to be reduced in size. On the other hand, Strasma believes that some of the cooperatives must take on more members, arguing that there is capacity on existing cooperatives for about 10,000 more families. He also calls for the establishment of a land bank so that willing sellers can put up land and the bank can mediate the sale of small farms to campesinos.

### 3.4 The Land Reform: Problems of the 1990s

The Land Bank was established in 1991, and one can see some of the Strasma (1990) recommendations reflected in other parts of the present government's land policy as well. Cooperatives that ISTA was forced to abandon during the war because they were located in conflict areas have had their membership capacity reassessed by the *Frente Farabundo Martí para la Liberación Nacional* (FMLN) and ISTA, and ex-combatants and tenedores are in the process of being settled there under United Nations supervision. A write-off of all accumulated production credit occurred in mid-1990 to help make banks more attractive for privatization and assist the cooperatives. In 1991, under the terms of Decree No. 747, a concerted effort was made to set up a collection system to process the payments for the cooperatives' land. After thirteen years of nonpayment, a mortgage payment will be expected of most cooperatives in 1993-94; a few made payments in 1992-93. Because of inflation, the land price, set when the land was acquired by the government in the early 1980s, is presently equivalent to a fraction of its going rate (even though the land market was depressed during the war). The effects of inflation on a new and further reduced asking price, soon to be instituted by ISTA, will quickly result in another substantial subsidy to the cooperative members.

The major provision of Decree No. 747 is a stipulation that cooperatives be encouraged to change the land tenure pattern under which they farm. While not specified in the law (see ISTA 1991), in practice some amount of private property usually accrues to individual members in the process of choosing under this new options program, if only a very small house plot and even if the cooperative picks the "collective" option. If cooperatives decide not to participate in new options, the old mortgage terms for land and other accumulated debts prevail. Furthermore, selecting to farm under a new option enables the cooperative to take advantage of

the new and lower mortgage payment referred to above. Thus the incentives augur well for fairly wide adoption of the program.

Under new options the cooperative could choose collective operation or could completely parcel the land among members. Alternatively, the cooperative could elect to continue under a mixed form of tenure (an individually titled plot with part of the collective enterprise remaining). Another option is *participación real*. That is, members could get individually titled small house plots (*solares*) on which to grow crops of their choice and obtain redeemable shares in the collective enterprise that should, theoretically at least, allow them some equity payment if they ever left the cooperative. To date, members who exit are refunded only the small amount they themselves paid into the social fund of the cooperative for such exigencies as emergency medical care and the like.

As soon as is practicable after the cooperative has selected a tenure form, ISTA measures the private plots, either the *solares* or the parcels, and draws up titles.<sup>3</sup> These individual tracts may be transferred to others by rental or purchase, but any new holders must work in agriculture and must not have a farm larger than 7 hectares already; they must, in other words, be *bona fide campesinos* as defined by Salvadoran law (a stipulation that is almost impossible to monitor). New members must also be acceptable to the established membership. When the cooperative selects its new option, it obtains its refigured mortgage, which is based on the cost of renting an equivalent amount of land in the area. That cooperatives select rather quickly under the *nuevas opciones* program—preferably well before the March 1994 elections—is presently a priority within ISTA. After having begun this process in 1990 (before Decree No. 747 was enacted), by January 1993, only 72 cooperatives had made the choice (though 22 of these had already parceled extralegally well before that time); by 1 July 1993, 158 out of 319 had chosen.

### 3.5 Data

The analysis in this section is designed to show how the agrarian reform is progressing in El Salvador. It uses, in the main, two new sources of information to obtain a close-up of some operating cooperatives. One of these is the "Census of Agrarian Reform Cooperatives" for 1991-92, prepared by the *Oficina Sectorial de Planificación Agropecuaria* (OSPA) of the *Ministerio de Agricultura y Ganadería* (MAG), which includes production (but, unfortunately, no operating-cost and labor) data. The present study was permitted to draw on this material prior to its publication in El Salvador. The second source is the 1993 Land Tenure Survey of El Salvador conducted for the sector assessment.

The data discussed in this chapter focus on a sample of 18 production cooperatives drawn from the 72 that had made a *nueva opción* choice by January 1993. The original intention was to obtain data on five cooperatives that had elected to remain as production cooperatives, five that had picked *participación real*, five that had elected a mixed system, and five that had chosen

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<sup>3</sup> A common criticism, however, is that ISTA does not register the titles properly.

individual tenure. Within these domains, choice of cooperatives was to be random. As it turned out, one cooperative refused to be interviewed, and another, located in the war's combat zone, had been "abandoned" by ISTA. On half of the 18 remaining prospective cases, ISTA and the cooperative disagreed as to which *nueva opción* had been chosen. In any case, the 18 treated here are representative of cooperatives in the process of choosing a future land-tenure type. Two separate questionnaires were administered for the survey, one to the *junta directiva* (board of directors) or to as many members of it as the interviewer could find, and a second to a sample of cooperative members.

In addition, a sample of 14 of the 37 cooperatives abandoned by ISTA during the war was drawn.<sup>4</sup> Because of the small number of Phase I cooperatives discussed here, they are treated as case studies and analyzed using descriptive statistics.

### 3.6 Beneficiaries of the Reform

As Table 3.1 shows, 85,227 families benefited from the reforms, about 43 percent of them in Phase I and 50 percent in Phase III, with the remainder comprising voluntary land transfers. Land reform beneficiaries thus represent about 10 percent of El Salvador's present population. Seventy-three percent of the reformed land is occupied by Phase I beneficiaries, and 24 percent by Phase III beneficiaries.

The ISTA beneficiaries have a per-member equivalent of slightly more than 8 mz. on which to farm while the beneficiaries of the *Financiera Nacional de Tierras Agrícolas* (FINATA, the agency administering the land reform program for Phase III beneficiaries) average about 2.25 mz. This latter figure approximates the national mean for smallholders in the country as reported in the 1993 Land Tenure Survey in El Salvador.<sup>5</sup>

In terms of farmland (Table 3.2), the westernmost and the easternmost departments of the country account for higher percentages of agrarian reform land than the other regions, with Phase III having greatest representation in the western departments, an area largely untouched by the war.<sup>6</sup>

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<sup>4</sup> The author conducted follow-up verification visits to 7 of these cooperatives to check the validity of the information gathered and was well satisfied with the work of the contracted survey firm that administered the questionnaires.

<sup>5</sup> The national mean for smallholders reported by the 1993 Land Tenure Survey in El Salvador is 2.27 mz.

<sup>6</sup> None of the OSPA-MAG data, it should be noted, considers the ISTA cooperatives that were abandoned in the war, and these missing cooperatives partially account for the fact that in the mid-1980s, ISTA was reporting on some 350 cooperatives while in 1991-92 its census contained only 319. The other part of the difference in numbers is explained by cooperatives that parcelized and those that had been dissolved.

**Table 3.1 Beneficiaries of Land Reform in El Salvador**

	Phase I <sup>b</sup>	Phase III <sup>c</sup>	Voluntary Transfers <sup>d</sup>	Totals
Families benefited	36,697	42,489	6,041	85,227
All beneficiaries	194,494	259,183	36,850	490,527
Manzanas <sup>a</sup>	301,234	97,447	15,389	414,070
Manzanas/family	8.21	2.29	2.55	4.86
Hectares	215,167	69,605	10,922	295,694
Hectares/family	5.86	1.63	1.81	3.47

Source: OSPA-MAG, *XI Evaluación del Proceso de la Reforma Agraria* (San Salvador: División de Seguimiento y Evaluación, Ministerio de Agricultura y Ganadería, December 1992), Cuadro 7, p. 12, and Cuadro 107, p. 135; and FINATA, *FINATA: Diagnóstico y su Proyección* (San Salvador: Financiera Nacional de Tierras Agrícolas, March 1993), Cuadro 3-1, p. 8.

- <sup>a</sup> 1 manzana equals 0.7 hectares. In El Salvador manzana is used more frequently than hectare, and therefore most measures of agricultural area in this study will be in manzanas.
- <sup>b</sup> Includes all beneficiaries of colonization programs prior to 1980 also. These are sometimes referred to as "Decree 842" properties, and Phase I is sometimes referred to as "Decree 154."
- <sup>c</sup> These are sometimes referred to as "Decree 207" properties.
- <sup>d</sup> These are properties that were offered for voluntary sale beginning in late 1987. The purpose of the decree facilitating voluntary sale to campesinos, that is, Decree 839, was to bring about transfers using the land market. *Financiera Nacional de Tierras Agrícolas* (FINATA), the government agency in charge of Phase III of the agrarian reform, was then in charge of Decree 839 properties. This authority passed to the *Banco de Tierras* (Land Bank) upon its founding in 1991. The *Banco de Tierras* has been fully occupied lately by the Peace Treaty land negotiations, so additions to this category have been negligible recently.

**Table 3.2 Total Area in Agrarian Reform in El Salvador, by Region**

Region <sup>a</sup>	Phase I	Phase III	Decree 839 <sup>b</sup>	Decree 842 <sup>b</sup>	Total
Region I (manzanas)	75,034.0	37,285.1	2,978.8	7,825.6	123,125
(percent)	27.2	38.3	19.5	30.7	29.7
Region II (manzanas)	61,953.2	23,162.6	3,031.4	3,634.1	91,781.3
(percent)	22.5	23.8	19.8	14.3	22.2
Region III (manzanas)	48,937.1	10,084.9	3,499.9	3,092.9	65,614.8
(percent)	17.7	10.3	22.9	12.1	15.8
Region IV (manzanas)	89,832.7	26,914.3	5,781.0	10,923.2	133,451.322
(percent)	32.6	27.6	37.8	42.9	
Total (manzanas)	275,757	97,446.9	15,291.1	25,475.8	413,972.100
(percent)	100.0	100.0	100.0	100.0	

Source: OSPA-MAG, *XI Evaluación del Proceso de la Reforma Agraria* (San Salvador: División de Seguimiento y Evaluación, Ministerio de Agricultura y Ganadería, December 1992), p. 12.

- <sup>a</sup> Conventionally, El Salvador is divided into geographical regions from west to east. Region I: *Departamentos* of Ahuachapan, Santa Ana, Sonsonate; Region II: Chalatenango, La Libertad, San Salvador, Cuscatlan; Region III: La Paz, Cabanas, San Vicente; Region IV: Usulután, San Miguel, Morazan, La Unión.
- <sup>b</sup> Refer to footnotes in Table 3.1.

### 3.7 Positive Features of the Land Reform Sector

Comparisons of land use between the reformed and the non-reformed sectors are rough because the country lacks a recent agricultural census (the last one was conducted in 1971). However, OSPA-MAG assembled some data showing land use in the non-reformed sector in 1987-88, which can be compared with land use on the cooperatives in 1987-88 and land use on the cooperatives in 1991-92 (Tables 3.3 and 3.4). The cooperative sector shows a higher percent of land planted to crops than the non-reformed sector. When compared with the non-reformed sector, the reformed sector also shows proportionally less land in pasture for raising livestock, several percent more land in forest, and less unused farmland. Taken together, these data seem to indicate more intensive cropping patterns on the cooperatives than in the non-reformed sector.

On the other hand, the tables show that over the last five years the percent of cooperative land that is cropped has decreased while that used for grazing livestock has increased, with no improvement in utilizing unused farmland. Some increase in forestland on cooperatives is noted. An explanation for the latter development is that some land designated as *matorral*, or "brush," and usually categorized as "unused farmland," was reclassified as "forestland." Left alone long enough, fallow land in the tropics returns naturally to trees.

Yields of major crops on cooperatives (Table 3.5) are all higher than the national average, with the exception of coffee, which nearly equals the national average. This is not surprising given the fact that Phase I cooperatives are believed to include a somewhat disproportionate share of the best land in the country. Earlier reports (Strasma 1989) note that the coffee yield is also higher on cooperative land. Low international prices for coffee in recent years are doubtless taking their toll on coffee yields.

### 3.8 Negative Features of the Land Reform Sector

This is not to say, however, that cooperatives use the resources at their disposal in a satisfactory manner. Given the pressing food and the foreign exchange needs of a country as tiny and as densely populated as El Salvador, land that is appropriate for farming needs to be worked in a consistent and sustainable fashion.

One concern is the lack of use of irrigation on cooperatives in the dry season. While most cooperatives grow some annual crops during the rainy season (*invierno*), most of this land lies idle during the dry months (*verano*). Of all land on cooperatives, 18 percent may be irrigated (Table 3.6). Few use this irrigation potential, and land actually irrigated dropped from 31 percent of the potential in 1990-91 to 27 percent in 1991-92. While irrigation systems are expensive to install (albeit Table 3.6 shows that some land with installed capacity is not being irrigated), it is this capability that would enable some farms to diversify and intensify their farming programs and, among other possibilities, grow vegetables.

**Table 3.3 Land Use, Reformed and Non-Reformed Sectors (1987-88 and 1991-92)  
(in manzanas)**

	<b>Non-reformed Sector, 1987-88</b>	<b>Reformed Sector, 1987-88</b>	<b>Reformed Sector, 1991-92</b>	<b>Total Non-reformed, 1987-88, and Reformed, 1991-92</b>
Agriculture	594,321	219,118	180,043	774,363
Livestock	675,308	64,582	75,474	750,782
Forest	69,178	36,329	46,434	115,612
Unusable	99,098	12,907	20,373	119,471
Infrastructure	76,332	14,224	23,538	99,870
Unused farmland	279,800	32,967	33,053	312,853
<b>Total</b>	<b>1,794,037</b>	<b>380,127</b>	<b>378,915</b>	<b>2,172,951</b>

Source: Aquiles Montoya, *El Agro Salvadoreño antes y después de la Reforma Agraria: Cuadernos de Investigación*, Año II (San Salvador: Dirección de Investigaciones Económica y Sociales, Centro de Investigación Tecnológicas y Científicas, June 1991), Cuadros No. 7 and No. 8; and OSPA-MAG, "Eighth Census of Agricultural Cooperatives," unpublished (San Salvador, 1993).

110

**Table 3.4 Land Use, Reformed and Non-Reformed Sectors, (1987-88 and 1991-92)  
(in percent)**

	<b>Non-reformed Sector, 1987-88</b>	<b>Reformed Sector, 1987-88</b>	<b>Reformed Sector, 1991-92</b>	<b>Total Non-reformed, 1987-88, and Reformed, 1991-92</b>
Agriculture	33.1	57.6	47.5	35.6
Livestock	37.6	17.0	19.9	34.6
Forest	3.9	9.6	12.2	5.3
Unusable	5.5	3.4	5.4	5.5
Infrastructure	4.3	3.7	6.2	4.6
Unused farmland	15.6	8.7	8.8	14.4
Total	100.0	100.0	100.0	100.0

Source: Table 3.4, above, derived from Aquiles Montoya, *El Agro Salvadoreño antes y después de la Reforma Agraria: Cuadernos de Investigación*, Año II (San Salvador: Dirección de Investigaciones Económica y Sociales, Centro de Investigación Tecnológicas y Científicas, June 1991), Cuadros No. 7 and No. 8; and OSPA-MAG, "Eighth Census of Agricultural Cooperatives," unpublished (San Salvador, 1993).

**Table 3.5 Yields of Several Major Crops, (1989-1993)\***

	1990-91 Cooperative Census	1991-92 Cooperative Census	1991-92 National Average	1993 Land Tenure Survey
Coffee (qq/hectare)	18.0	17.4	17.9	25.5
Cane (tons/hectare)	101.2	124.0	72.0	90.0
Hybrid corn (qq/hectare)	60.7	58.5	39.5	73.0
Rice (qq/hectare)	76.9	69.3	56.7	94.0

Source: OSPA-MAG, *XI Evaluación del Proceso de la Reforma Agraria* (San Salvador: División de Seguimiento y Evaluación, Ministerio de Agricultura y Ganadería, December 1992), pp. 39 and 46; OSPA-MAG, "Eighth Census of Agrarian Reform Cooperatives," unpublished (San Salvador, 1993); 1993 Land Tenure Survey in El Salvador, unpublished.

\* Data in this table is expressed in hectares so readers can make international comparisons.

**Table 3.6 Farmland Area That Is Irrigable and Irrigated on ISTA Cooperatives (1990-91 and 1991-92) (in manzanas)**

Distribution	1990-91	1991-92
Potential farmland	202,742	201,998
Irrigable farmland	35,864	36,246
Farmland with installed irrigation infrastructure	15,554	15,578
Farmland presently irrigated	11,028	9,701
% of farmland that is irrigable	18%	18%
% of irrigable farmland that is irrigated	31%	27%

Source: OSPA-MAG, *XI Evaluación del Proceso de la Reforma Agraria* (San Salvador: División de Seguimiento y Evaluación, Ministerio de Agricultura y Ganadería, December 1992); and OSPA-MAG, "Eighth Census of Agrarian Reform Cooperatives," unpublished (San Salvador, 1993).

Another suboptimal use of the land is in the maintenance of natural pasture, which is either completely unutilized or used to graze only a few head of livestock per 100 mz. In the judgment of many local technicians interviewed, farmland could be used more intensively than it is, which would take production pressure off of marginal land that should be allowed to return to brush and trees. Even without including the war-abandoned ISTA cooperatives, the western and especially the eastern departments of the country contain a great deal of natural pasture. It may be that the 25-percent figure (Table 3.7) for unused farmland and natural pasture is lower than in the non-reformed sector, however. A recent FAO estimate sets the nationwide figure of unused farmland at 32 percent.<sup>7</sup> While this calculation was carried out in the absence of data from an agricultural census, reasons given for the large estimates range from the general unprofitability of farming (cotton prices have dropped precipitously on the world market) to the fact that much very good land became highly indebted as production credit was regularly defaulted upon during the war, meaning that its producers cannot obtain production credit now. Factors exogenous to the cooperatives probably play a large part in determining their economic performance,<sup>8</sup> but, as shown below, even given the present agricultural policies, some of the enterprises do quite well while others do very badly. The land-use pattern of the cooperatives depicted in Table 3.8 appears to have changed very little over the past four years.

**Table 3.7 Area (in manzanas) and Percent of Cooperative Land Used for Natural Pasture and Unused Farmland, 1991-92**

Region	Pasture	Natural Pasture	Unused Farmland	Percent of Total Cooperative Area that is Natural Pasture and Unused Farmland
Region I	16,573	13,157	2,797	19.4
Region II	9,330	8,171	4,491	19.6
Region III	9,514	5,844	4,457	26.4
Region IV	18,493	17,321	11,864	34.5
National	53,910	44,493	23,609	25.2

Source: OSPA-MAG, "Eighth Census of Agrarian Reform Cooperatives," unpublished (San Salvador, 1993).

<sup>7</sup> Personal conversation with Luis Lopez Córdovez, FAO/CEPAL, San Salvador, 5 July 1993.

<sup>8</sup> Problems with using ever-higher levels of fumigants on cotton, which contributed to environmental damage as well as to health problems among campesinos, became well-known among the general public. After the war, many planters elected to leave land idle or use it for grazing rather than returning to cotton and possible chemical overuse. Some argue that if a sustainable way could be found to grow cotton, the local market could absorb more than is currently produced.

118

**Table 3.8 Land Use on ISTA Cooperatives (1988-92)**

Land Use	1988-89	1989-90	1990-91	1991-92
Collective area	30.3%	31.2%	31.5%	31.9%
Individual area	14.9	15.2	15.0	15.6
Area of pasture	22.5	21.8	21.9	19.9
Area of forest	11.9	13.0	12.8	12.2
Not utilizable for agriculture or forest	4.8	5.5	5.3	5.4
Infrastructural area	5.7	5.7	6.1	6.2
Unused farmland	9.9	7.6	7.4	8.8
Total area of census	100	100	100	100
Number of cooperatives in census	328	325	327	319

Source: OSPA-MAG, *XI Evaluación del Proceso de la Reforma Agraria* (San Salvador: División de Seguimiento y Evaluación, Ministerio de Agricultura y Ganadería, December 1992), Cuadro 9, p. 17; and OSPA-MAG, "Eighth Agricultural Census of Agrarian Reform Cooperatives," unpublished (San Salvador, 1993).

Even with the emphasis that the present government has placed on individual properties, until the end of the 1991-92 agricultural year, little change is recorded in the amount of land dedicated to individual property (Table 3.8). Twice as much land is given to collectives as to individual cropping enterprises, a proportion that has remained fairly constant over the period examined here. It is expected that in 1992-93, there will be an increase in individual farming and a corresponding decline in collective activity because of the new options program.

**Table 3.9 Net Income, Payments on Defaulted Production Credit Due, and  
Average per-capita Surplus Income from Collective Enterprises  
(1993 Sample of Agrarian Reform Cooperatives)**

<b>Cooperative No. and Future Type</b>	<b>Net Income</b>	<b>Production Credit Default to Pay<sup>a</sup></b>	<b>Per-Capita Surplus Income<sup>b</sup></b>	<b>Region</b>
1. Collective	160,839	1,395,891	(16,467)	I
2. Mixed	3,614,164	2,000,000	23,738	I
3. PR	0	847,000	(21,718)	I
4. PR	2,530,859	4,711,000	(20,001)	I
5. Mixed	190,534	676,610	(15,680)	I
6. Collective	8,577,454	0	12,254	I
7. Collective	2,097,500	0	11,039	II
8. Mixed	170,568	0	4,264	II
9. Collective	179,752	0	1,619	II
10. Individual	22,760	500,000	(19,089)	II
11. Collective	200,051	1,328,340	(15,247)	II
12. Mixed	1,637,649	0	23,394	II
13. PR	3,250,413	0	25,393	III
14. Mixed	0	0	0	III
15. Collective	83,384	9,500	1,894	IV
16. Individual	0	0	0	IV
17. Mixed	208,000	0	7,172	IV
18. Mixed	65,632	500,000	(13,163)	IV
Totals and member average	22,989,559	11,968,341	member average C/5865	

Source: 1993 Land Tenure Survey in El Salvador, unpublished.

a/ Since this column represents production debt accumulated from the 1990 moratorium, assuming that the cooperative must pay the defaulted amount in one year may be too severe. Table 3.12 relaxes this assumption.

b/ Per-capita surplus remaining from collective enterprises is available for land payment, distribution, or reinvestment.

### 3.9 Analysis of Cases

Data from the 18 operating ISTA cooperatives studied (Table 3.9) show great variability in economic performance. While the study intended to select a random sample, according to ISTA records, of 20 cooperatives representative of each choice in the *nuevas opciones* program, what resulted were 6 collective choices, 7 mixed, 2 *participación real*, and 2 individual (Table 3.9). Some members are genuinely confused, perplexed not only about the choice itself, but also about the government's intentions in offering it, despite the fact that ISTA began disseminating information on the program three years ago. While the government clearly favors private farming, it faces formidable opposition to individualization in campesino organizations with Christian Democrat or FMLN backing. The successful cooperatives are also making a forceful case for their members' remaining together. The argument of the government is that individually titled properties will give the campesino sector more security and clearer incentives. The FMLN, on the other hand, interprets the preference for individual parcels as breaking up important economies of scale, and the Christian Democrats and the FMLN together believe that individualization will weaken the peasant sector as a countervailing weight against the government and will rob it of its potential to obtain bank credit without enormous transaction costs. In this pre-election period, these two groups are also concerned that the new options program may deprive them of an organized part of their political base.

The *participación real* option, as explained earlier, is a way to grant equity shares in the enterprise and, hence, exit privileges to members. Presumably, departing members could sell their shares to other campesinos (provided the buyers have all of the requisite attributes as defined in Salvadoran law—that is, they may not have more than 7 hectares of land and must work in agriculture to make their living) who are acceptable to the remaining cooperative membership. The availability of the *participación real* option presumably means that members will not forfeit the "sweat equity"—and the part of the end-of-year profit that goes into farm investment—when they leave the cooperative. Furthermore, it may mean that the cooperative will not be as reluctant as it has been in the past to expel members who habitually do not work to their capacity or burden the organization with their presence in other ways. The problem with this option is that few campesinos and, for that matter, *juntas directivas* would have the redemption cash that is needed to function properly. From the standpoint of the cooperative, one could imagine that a contribution to the redemption fund might be added onto the land payments in some manner. The campesinos, in turn, might use foreign exchange sent to them by family members living abroad to buy into cooperatives. However, the ISTA employees and cooperative members interviewed had given little thought to this matter and no preparation is being made for redemptions. Unless this issue is more carefully considered, the potential exists for a great deal of member dissatisfaction whenever the option is chosen.

Strasma comments on the matter of *participación real*:

I believe the best plan is to let the market determine the amount paid to those who depart—but requiring would-be entrants to buy from them at a price negotiated by the parties.

In most cases, capitalized profits (if these ever materialize in quantity) will and should be invested in illiquid form. If the cooperative must maintain liquidity, it needs a fluid market in which to sell some of its land quickly—sort of like an open-end mutual fund, which redeems shares on demand by selling its own portfolio as needed to do so.

Given the 13 years of illiquidity and uncertainty, it would not be the least bit surprising if many participants did not want to take the cash and run, if they but could. But cooperatives could impose conditions, such as calculating the book value and announcing that qualified entrants must pay that amount to would-be departers, with  $x\%$  to be paid in cash and the rest in annual, quarterly, or monthly installments. Sanctions would be needed for nonpayment, perhaps in the form of expulsion of the overdue entrant.

A greater threat is that without the *participación real* option, leaders are tempted to play a game in which departers get nothing and no one is allowed to enter. Rather, the remaining incumbents hire day labor as needed and divide the pie into fewer shares every year.

I would like to see a *reglamento* stating that every *participación real* cooperative had to have a list of would-be entrants, all of whom meet the legal eligibility norms. The list would be open to public inspection by all members and by other would-be entrants. And every year, just after harvest, any member could announce that he was interested in leaving. The cooperative would then hold a public auction, at which all would-be entrants would bid openly for his share. The potential departer could establish a reservation price, or could attend and decide on the spot whether to accept the high bid and go within a month, or to remain.

In this plan, the book value is a reference point but not a guarantee, the cooperative is under no threat of liquidity crisis, and the cooperative leaders are not able to confiscate the equity of those who leave, as many do now. Potential entrants would know the "rules of the game," and all members would know that their membership had a tangible value. Potential departers would know about what amount they could get for their shares, as they weigh alternative strategies such as moving to town or driving a truck. And leaders would be under some pressure to make membership attractive rather than spending all the net income on their own salaries and perquisites. (Personal correspondence, John Strasma to William C. Thiesenhusen, 16 August 1993.)

By 1 July 1993, 158 cooperatives had chosen one form or another of organization under the new options program, yet some explanation is in order for the "official count" shown in Table 3.10. Because so many were unwilling to abandon their collective enterprises entirely

(and, by law, permanent crops such as coffee cannot be divided),<sup>9</sup> some suboptions not defined in Decree No. 747 were agreed upon, which gave members (aside from those electing *participación real*) the option of obtaining title to a *solar*. The choices shown in Table 3.10 are much more form than substance. They reduce to the fact that 64 cooperatives picked individual tenure while 94 chose a mixed combination of individual and collective. At one end of this spectrum of "mixed" tenure is a situation where the collective enterprise remains almost unaltered and each member has a tiny *solar*. At the other end lie a number of almost family-size parcels with a small, residual, collective project.

**Table 3.10 Type of Land Tenure Chosen in the ISTA *Nuevas Opciones* Program as of 1 July 1993**

Type of Land Tenure Chosen	Numbers of Cooperatives
Individual parcels	64
<i>Participación real</i>	33
Mixed: collective and individual	31
Collective: with <i>solares</i>	30
Total	158

Source: ISTA, and interviews with Julio Ramirez.

What of the 72 cooperatives referred to earlier that made a new options choice in early 1993? Are any ex ante income differences associated with different choices? The census of agricultural cooperatives (OSPA-MAG 1993) reported on only 50 of them, the other 22 already having become individual parcels. Table 3.11 indicates that average gross sales for those who decided to have their operation parcelled generated a somewhat smaller amount of gross sales than those that chose to be "mixed." One might expect that if collective enterprises were lucrative, there would be pressure to remain together, and this seems to be the case. The case is clouded, however, with the two *participación real* cases, which have a larger proportion of collective land than the mixed category and show lower gross sales than either the individual or the mixed option. Table 3.11 clearly shows that those who chose individual property have the most prior experience with individual farming and a higher proportion of land already being individually farmed.

<sup>9</sup> The idea that there are economies of scale in crops such as coffee is strong in El Salvador despite the evidence from Costa Rica, where coffee is very successfully grown on small farms.

**Table 3.11 Economic Situation of *Nuevas Opciones* Participant Cooperatives in Terms of 1991-92 Production<sup>a</sup>**

Type	Number of Cooperatives (members)	Gross Farm Sales (colones)	Gross Sales per Member (colones)	Ratio of Land Farmed Individually: Collectively
Individual	22 (1914)	27,512,181	14,374	0.59
Mixed	26 (2838)	47,851,272	16,861	0.43
<i>Participación real</i>	2 (161)	2,113,942	13,130	0.26

Source: OSPA-MAG, "Eighth Census of Agricultural Cooperatives," unpublished (San Salvador, 1993); and ISTA.

- <sup>a</sup> Seventy-two farms had chosen under the new options program as of the end of January 1993, the time when the survey sample was drawn. Not included in the data in the table are the 22 whose choice of individual plots in early 1993 was the ratification of a previously existing situation. "Collective land" in the last column includes pasture. The table is expressed in colones of 1 March 1992.

Returning to Table 3.9, which considers only the collective enterprise of the cooperatives (the classification "individual," "collective," etc., refers to future plans—all of the cooperatives have a collective component in the year of analysis), shows that 15 of the 18 have net incomes greater than zero. The problem is that they are not all debt free. All are behind in their mortgage payments (as shown later), and 7 have defaulted on production credit. Considering that the first claim on a cooperative's net income is paying past-due production credit (a major effort to oblige payment of mortgage credit has not yet begun), the available income per member for consumption, mortgage, and investment expenditures is displayed in the "per-capita surplus income" column. This subtraction made, only 9 cooperatives—half of them—show per-member income generated (by the collective part of the operation) greater than zero.

Table 3.12 adds to this a preliminary economic picture of the 18 cooperatives by showing how much net income each member realizes from the individual parcel which, when added to surplus income from the collective enterprise (Table 3.9, col. 4), is the per-member amount available to pay the mortgage, repay defaulted credit, and budget for consumption and investment. Assuming that a land payment had been required this year, only 2 of the cooperatives studied would not have been able to make it.

Note that Table 3.12 changes a basic assumption of Table 3.9. It shows that the first claim on net income is the payment for land, not defaulted production credit. This table assumes that the second claim on net income will be defaulted credit and that only one-third of this needs to be repaid each year (because the recent default was accumulated over three years). After paying the mortgage and one-third of the production credit, 6 cooperatives have negative cash flows.

124

**Table 3.12 Mean Income per Member, Land Payment, and Amortized Defaulted Short-Term Credit under New Options, Surveyed Cooperatives (colones per member)**

Cooperative	Mean Parcel Size (mz)	Mean Net Income			Mortgage Payment Due First Year	Amortized Defaulted Short-Term Credit <sup>c</sup>	Income for Consumption and Investment
		Individual Parcel	Collective Activity	Total			
1	0	0	2,145	2,145	266	6,203	(4,324)
2	1.9	4,960	53,149	58,109	NI <sup>b</sup>	9,803	NI
3	1.9	4,127	0	4,127	312	7,239	(3,424)
4	0	0	23,219	23,219	779	14,406	8,034
5	1.6	6,526	6,146	12,672	1,613	7,275	3,912
6	0.3	(117)	12,253	12,136	949	0	11,187
7	0.7	224	11,039	11,263	1,610	0	9,653
8 <sup>a</sup>	2.0	2,000	4,264	6,264	553	0	5,711
9	3.5	4,897	1,619	6,516	131	0	6,385
10	1.5	2,000	910	2,910	462	6,666	(4,218)
11 <sup>a</sup>	0.3	300	2,703	3,003	530	5,984	(3,511)
12	1.8	2,718	23,394	26,113	530	0	25,583
13	1.0	1,206	25,394	26,600	1,185	0	25,415
14 <sup>a</sup>	0.4	800	0	800	937	0	(137)
15 <sup>a</sup>	3.0	3,000	2,136	5,136	901	81	4,235
16	1.9	(716)	0	(716)	1,269	0	(1,985)
17	1.0	(543)	7,177	6,634	1,923	0	4,711
18	1.1	335	1,989	2,324	1,689	5,050	635
Simple mean	1.3	1,762	9,863	11,625	919	3,484	10,706

Source: 1993 Land Tenure Survey in El Salvador, unpublished; and Table 3.24, col. 6 (this chapter, p. 41).

<sup>a</sup> Indicates interpolation in the product of the parcel.

<sup>b</sup> NI means that no information was available from ISTA.

<sup>c</sup> This column relaxes the severe assumption of Table 3.9 that defaulted credit must be repaid immediately and, since the default was accumulated over 3 years, gives cooperatives 3 years to repay. The column thus displays 1/3 of the defaulted short-term credit.

125

To determine why some cooperatives do better than others would require more investigation than we are able to do here, but is there anything we can discern from the farm enterprise patterns on these cooperatives that indicates why some show "satisfactory" levels of income while others do not?

The economic goal of these cooperatives is to permit payment of mortgages and production credit while allowing adequate—and, presumably, improving—levels of investment and consumption.

Table 3.13 displays gross sales and net income for 1992–93 together with gross sales from 1991–92 as calculated by the census of agricultural cooperatives (in 1993 prices). With one exception, those who did well in 1992–93 also did well in 1991–92, an indication of some consistency from one year to the next in economic performance. (It also engenders some confidence in data gathered with two different instruments.) Picking the top 8 cooperatives in terms of their gross income per member in 1992–93 and choosing, where possible, those that demonstrated some agreement with the OSPA-MAG data (cooperatives 2, 4, 5, 6, 7, 11, 12, and 13) indicates that these superior performers had substantial per-member plantings of one or several perennial crops (cane, coffee, or bananas) and/or a more diverse farming pattern than the remainder. The higher the dependence on basic grains, on the other hand, the lower the gross income that is realized (cooperatives 3, 14, and 16).

Making inferences from gross sales information, Table 3.14 takes 50 of the cooperatives that made a choice in the *nuevas opciones* program and displays those that could and could not make a payment for land (again assuming that a mortgage payment would be the first claim on net income). It determines that, given the gross incomes realized, 21 of the 50 cooperatives would not be able to meet the obligation.

Table 3.15 examines 14 of the 37 abandoned ISTA cooperatives. Many of the original cooperative members left during the heat of battle, and some returned after the war. But a few squatters (*tenedores*) came in to take their place (in some cases, of course, the *tenedores* are the remnants of the original cooperative group). The FMLN troops, especially, relied on some of these *tenedores* to feed and sometimes shelter them during combat, and insisted that they be given land after the war. The peace accords stipulate that *tenedores* as well as ex-combatants be granted land and that this property come from voluntary sales by private owners and from cooperatives that have a membership capacity larger than the number of settlers presently resident there.

The membership capacity of the abandoned cooperatives, as negotiated by FMLN, ISTA, and the United Nations, is shown in Table 3.15, as are the current membership, the amount of farmland unused at the time of the interview, and the net incomes per capita of the *tenedores*. When the capacity is filled, ex-FMLN soldiers and *tenedores* will share these farms, but one recent study notes the slowness with which potential members were showing up to be "verified" (Joya de Mena et al. 1993). In fact, the European Community (EC) is having somewhat better

**Table 3.13 1992-93 Gross and Net Income Compared with 1991-92 Gross Income, with Farming Programs and Area in Export Crops per Member, Sample of ISTA Cooperatives (in constant 1993 colones)**

Cooperative No.	1992-93	1991-92	1992-93		
	Mean Gross Income per Member	Mean Gross Income per Member	Manzanas in Coffee/Cane Banana per Member	Mean Net Income per Member <sup>a</sup>	Farming Program in 1992-93 <sup>b</sup>
1	7,840	9,105	2.0	2,145	1,2
2	81,056	24,673	1.0	58,109	1,3,4,5,6
3	4,227	2,260	0	4,127	4
4	43,886	58,625	4.0	23,219	1,6
5	22,014	16,577	4.0	12,672	1,2,4
6	22,882	28,042	4.0	12,136	1,2,4
7	31,903	NI	4.7	11,263	2,4
8	9,420	NI	0.62	6,264	1,4
9	7,167	6,614	0.61	6,516	2
10	4,180	7,582	3.2	2,910	1,4
11	27,566	36,885	4.7	3,003	2,4
12	34,110	36,008	3.5	26,113	1,4,7
13	30,170	32,661	2.1	26,600	1,4,3,6,7
14	900	NI	0	800	4
15	8,358	8,937	0.41	5,136	2,4,6,7,8
16	(616)	1,093	0	(716)	4,5
17	10,798	19,301	0	6,634	4,8
18	3,071	21,879	0.55	2,324	1,4,6
Simple mean	19,384	20,683	2.0	11,625	

Source: 1993 Land Tenure Survey in El Salvador, unpublished; and 1991-92 data from OSPA-MAG, "Census of Agricultural Cooperatives," unpublished (San Salvador, 1993). The 1991-92 income is adjusted to March 1993 prices utilizing data from the Banco Central de Reservas, "Variación mensual del índice de precios al por mayor," (May 1993), Cuadro 1; and "Índice de precios al consumidor," IPC base, December 1992 (May 1993), Cuadro 1.

<sup>a</sup> From Table 3.12.

<sup>b</sup> Key to column 4: 1, sugarcane; 2, coffee; 3, bananas; 4, basic grains; 5, sesame; 6, dairy cattle; 7, cattle for fattening; 8, henequen.

127

**Table 3.14 Based on Gross Incomes, How Many Cooperatives under the *Nuevas Opciones* Program Could Have Made a Mortgage Payment in 1992-93?**

Tenure Type	Able to Make a Mortgage Payment in 1991-92	Unable to Make a Mortgage Payment in 1991-92	Totals
Mixed and collective	16	10	26
Individual	11	11	22
<i>Participación real</i>	2	0	2
Totals	29	21	50

Source: OSPA-MAG, "Eighth Census of Agricultural Cooperatives," unpublished (San Salvador, 1993).

**Table 3.15 Membership, Settlement Capacity, Unused Agricultural Land, and Net Farm Income from Collective Enterprises on a Sample of "Abandoned" ISTA Cooperatives to Be Resettled under the Peace Accords, May-June 1993**

Cooperative No. and Future Type	Membership	Membership Capacity	Percent Farmland Unused, May 1993	Net Income of Cooperative
A. Collective	30	40	83	C/58,897
B. Mixed	31	160	73	(237,516)
C. Individual	28	28	16	0
D. Mixed	30	35	84	(63,634)
E. Mixed	38	98	62	(20,500)
F. Collective	43	52	28	13,954
G. Mixed	46	80	83	16,137
H. Collective	65	360	94	(185,000)
I. Collective	70	70	75	(38,000)
J. Collective	342	392	38	64,914
K. Mixed	70	175	35	(24,360)
L. Collective	25	80	80	0
M. Mixed	33	140	27	132,970
N. Collective	35	90	60	(131,000)
Totals and averages per cooperative	886	1,800	60	(29,509)

Source: 1993 Land Tenure Survey in El Salvador, unpublished.

128

luck in filling the FMLN quotas, apparently because it is granting a small house allowance that will make it possible for ex-combatants to buy construction materials (the tenedores have some crude dwellings, but there are often none for the ex-combatants). Furthermore, the EC (which is settling 1,500 FMLN and 1,500 Salvadoran armed forces in Usulután) offers somewhat more technical assistance and credit. In addition to lack of housing and technical services, other reasons for the quotas not being filled are: (1) many ex-combatants and tenedores do not wish to be moved from their home communities; (2) ex-soldiers are not good candidates for farmers (the war was so protracted that many young people know no other life than the military)<sup>10</sup>; (3) many tenedores do not welcome groups of strangers to share resources that they have been using and wish to retain for their own children (in some cases tenedores have made life difficult for newcomers); and (4) logistical difficulties are caused by the fact that each of the five FMLN factions—as well, of course, as the government ex-combatants—need to be settled on different properties.

Another possible reason for the difficulty in filling cooperative quotas is that the tenedor group has contracted debts for production credit and has defaulted; these past-due accounts will have to be paid by the cooperative as a whole when it is reconstituted. While low incomes are documented in Table 3.15, the defaulted production credit is shown in Table 3.16. Table 3.16 includes a few nongovernmental organization (NGO) loans, which are somewhat larger than bank advances for comparable (subsistence) farming patterns and thus will prove to be harder to repay.

### 3.10 Labor

After combining standard coefficients from MAG to reflect labor demand for the enterprise combination of each active cooperative, the calculated figure was compared to labor supply. The results are displayed in Table 3.17.

Because neither the 1993 Land Tenure Survey in El Salvador nor the OSPA-MAG census of agricultural cooperatives measured the amount of labor available to the reform enterprises, it was estimated; two full-time laborers (at 257 days per year)<sup>11</sup> were assumed per family at a daily wage rate of 17 colones. While that amount is below the minimum rural wage (C/22.45 per day), it appeared to be what many workers actually received over the past months.

The data show that 6 of the 8 "good performing" cooperatives from Table 3.13 (i.e., 2, 5, 6, 7, 11, 12) generate more jobs than those available to be taken by the enterprise families themselves. On the other hand, the "poorest performing" cooperatives show considerable underemployment. On 11 cooperatives, there is a greater labor supply than labor demand,

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<sup>10</sup> It may be speculated that the long hours of waiting for action followed by bursts of intense and wary activity do not train a young person very well for the steady work pace required for farming.

<sup>11</sup> The 257 days is taken from Aquiles Montoya (1991). Apparently MAG also uses this number of days to designate "full-time" agricultural work.

which means underutilization of human resources. Indeed, 56 percent of available labor on these 11 cooperatives is unemployed.

The column "bank-financed labor" in Table 3.17 suggests that the cooperative member views the enterprise very differently from an economic analyst. The investigation thus far has been along the latter lines, and a member's viewpoint is now needed.

Most cooperative members do not regard the cooperative primarily as a source of dividends they receive at the end of the year. For members, the cooperative is the source of a daily wage, which is paid out of the production credit that the banks lend. While analysts of cooperatives regard the amount spent for member labor as an "advance" to be subtracted as

**Table 3.16 Net Income, Production Credit Default, and Capacity to Make a Land Payment for a Sample of "Abandoned" ISTA Cooperatives (1992-93)**

Cooperative	Net Income per Member	Production Credit Default to Pay (cooperative)*	Remaining to Make Land Payment per Member
A	C/1,963	C/1,800	C/1,903
B	(7,661)	192,000	(13,854)
C	0	0	0
D	(2,121)	18,815	(2,748)
E	(539)	0	(539)
F	324	0	324
G	350	0	350
H	0	185,000	(2,846)
I	(584)	16,000	(813)
J	190	40,000	73
K	(348)	19,000	(619)
L	0	30,000	(1,200)
M	4,029	30,000	3,120
N	(3,742)	134,000	(7,570)
Averages	(581)	47,615	(1,744)

Source: 1993 Land Tenure Survey in El Salvador, unpublished.

- \* Mortgage debt for these abandoned cooperatives have not yet been calculated by ISTA.

120

**Table 3.17 Supply and Demand for Labor, Selected Sample of ISTA Cooperatives, 1992-93**

<b>Cooperative</b>	<b>Unused Farmland (manzanas)</b>	<b>Labor Supply (days)<sup>a</sup></b>	<b>Labor Demand (days)</b>	<b>Bank-Financed Labor (days)</b>	<b>Surplus Labor (days)</b>
1	179	38,550	21,299	10,228	17,251
2	0	34,952	41,055	18,111	(6,103)
3	325	20,046	8,190	0	11,856
4	0	56,026	41,548	40,000	14,478
5	0	15,349	23,279	8,418	(7,930)
6	40	359,800	461,675	193,204	(102,675)
7	0	97,660	180,380	166,667	(82,720)
8	0	20,560	7,735	1,500	12,825
9	0	57,054	13,260	1,236	43,794
10	44	12,850	5,447	1,163	7,403
11	0	38,036	69,528	65,120	(31,492)
12	0	35,980	41,788	5,767	(5,808)
13	0	65,792	37,650	18,280	28,142
14	241	41,120	3,150	0	37,970
15	0	20,046	16,290	2,333	3,756
16	396	19,532	6,688	0	12,844
17	104	14,906	15,960	6,667	(1,054)
18	100	16,962	4,871	1,333	15,629
<b>Means and totals</b>	<b>79</b>	<b>964,421</b>	<b>999,793</b>	<b>540,027</b>	<b>(35,372)</b>

<sup>a</sup> Assumptions: Each family has both a cooperators and one other full-time laborer available to work; there are 257 days in the agricultural year.

121

an operating expense from gross income to yield net returns, the members regard the payment as a wage, pure and simple. Once paid, it is never taken back from an individual, regardless of the economic condition of the cooperative, and given the job scarcity in rural El Salvador, competition among members who are first claimants to that "labor fund" is keen.<sup>12</sup>

Table 3.18 shows how cooperative members regard their economic situation. They obtain their income from three sources—the individual plots, the wage (more properly, the advance), and the year-end dividend.<sup>13</sup>

The crux of the problem is that individual members are often not concerned with whether the cooperative as an entity can repay its production credit at the end of the year or, for that matter, with its total debt position. The cooperative is powerless to compel the campesinos to refund advanced wages if it, as an economic entity, shows that it cannot repay its production credit. When final cooperative accounts are reckoned at the end of the year, advanced wages have long since been spent. The fact that for members, the advance is simply a going wage, is a weakness of the production cooperative as an economic entity and has never been satisfactorily addressed with policy in El Salvador and elsewhere. One way to solve this accounting problem is to internalize and/or abandon the wage with a system of individual farming; unpaid family members then do the work and their labor is rewarded with the harvest.

This explains why total net income *generated* per member (Table 3.12, col. 5) is usually different from total net income actually *received* by members (Table 3.18, col. 6). In cases where accrued income is substantially less than income generated (cooperatives 2, 4, 12, and 13), the cooperative has some scope for investing and paying off its debt. The cooperatives where accrued income per capita is greater than generated income (cases 1, 7, 9, and 11) are among the most economically unsustainable enterprises in the sample, for they distribute without having the capacity to save or invest.

A full-time, wage-earning campesino in El Salvador would work 257 days per year, earning about 17 colones per day in 1993 or 4,369 colones annually. Mean accrued income for cooperative members, (Table 3.18) is nearly double that figure, although cases 2 and 7 raise the mean substantially; the median income for cooperative members in the sample is 5,618 colones. As the 1993 Land Tenure Survey in El Salvador shows, a FINATA beneficiary earns about 2,774 colones from his parcel and 1,777 colones from other wage work, or 4,551 colones in total, slightly more than a full-time, wage-earning campesino and about half the mean earnings of a cooperative member.

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<sup>12</sup> It was observed by interviewees that some cooperatives act in fiscally irresponsible ways in terms of these wage advances, paying more than the going wage or rendering a full eight-hour recompense for only a half-day of work. That situation was not observed in the cooperatives in this study.

<sup>13</sup> The table assumes that the cooperative retains half of its net profit for investment purposes and uses the rest for distribution—not an uncommon arrangement, interviews revealed.

**Table 3.18 Mean Income Accruing to Cooperative Members, Sample of ISTA Cooperatives, 1993**

Cooperative	No. of Members	Mean Net Income from Parcel (C/)	Mean Income from "Wage" (C/)	Mean Income from Dividend (C/)	Mean Income that Accrues to Member (C/)
1	75	0	2,332	0	2,332
2	68	4,068	4,528	13,014	21,610
3	39	4,127	0	0	4,127
4	109	0	6,238	0	6,238
5	31	6,526	4,616	0	11,142
6	700	(117)	4,692	5,322	9,897
7	190	224	14,912	5,142	20,278
8	40	2,000	637	1,644	4,281
9	111	4,897	845	3,008	8,750
10	25	2,000	791	0	2,791
11	74	300	14,960	0	15,260
12	70	2,718	1,401	9,954	14,073
13	128	1,206	2,428	11,168	14,802
14	80	800	0	0	800
15	39	3,000	1,017	981	4,998
16	38	(716)	0	0	(716)
17	29	(543)	3,908	1,416	4,781
18	33	335	687	0	1,022
Totals or simple means	1,879	1,762	3,555	2,869*	7,858

Source: 1993 Land Tenure Survey in El Salvador, unpublished.

\* This table assumes that half of the end-of-year profits are distributed to members in a dividend, a practice that at least some of these cooperatives follow.

123

### 3.11 Credit

Credit for production purposes, and for the land that most have worked for thirteen years without paying rent and without making a mortgage payment, is the most exigent problem of the Phase I cooperatives. Throughout the 1980s, default on production credit was an impediment to obtaining new production loans. By the end of the 1980s, most cooperatives were no longer creditworthy. Strasma's (1990) account of this situation is thorough, and many of his policy suggestions are as valid today as when he made them.

In June 1990, the Central Bank and the *Fondo de Financiamiento para la Reactivación de las Actividades Productivas* (FFRAP) exonerated all production credit from agrarian reform cooperatives (see Table 3.19). While FFRAP was determined to collect these debts, it was not able to do so. ISTA is now threatening cooperatives that do not accept the new options program with debt redemption in the future, however.

Table 3.20 shows that debt default has reappeared. By the end of the 1992 crop year, new nonpayment on production credit totaled about 39 million colones. Tables 3.21 and 3.22 use FFRAP records to examine this current default. Seven of the 18 operating cooperatives that had their delinquency exonerated in 1990 were in default again in 1993. Six that had their debt excused in 1990 have not, to date, repeated their nonpayment. On the abandoned cooperatives, five that had defaulted previously were again renegeing. Three in the abandoned category have not repeated their default, but five previous nondefaulters became delinquent.

Another concern is the issue of land debt. Few cooperatives have made payments on their mortgages, and the feeling that high mortgage payments were a major deterrent to collection is the reason ISTA is reducing land payment amounts. Table 3.23 shows that for the cooperatives in this study, inflation had already worn payments down substantially prior to the new options program.<sup>14</sup> Little had been done to collect any reimbursement, however, and when some cooperatives refused (some because they could not), most of the others decided not to pay either.

However, these figures were adjusted to 1993 prices by the consumer's price index (CPI), and while land prices dropped during the conflict and have recently begun to turn upward again, they still have not risen to the adjusted figures in Table 3.23 (in which 1993 land and mortgage payments should be read as "potential"); they will probably do so in the near future. As shown in Table 3.23, only 3 of the 18 cooperatives in the present sample have made any payment on their mortgage.

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<sup>14</sup> Average member debt was 2,982 colones per annum (4,864 colones in 1993 prices). Average price per 1 manzana of land was 3,724 colones (25,442 in 1993 prices).

**Table 3.19 Production Credit Exonerated by the Government of El Salvador,  
Various Banks, ISTA Cooperatives, 30 June 1990**

<b>Financial Institution</b>	<b>No. of Cooperatives</b>	<b>Number of Loans</b>	<b>Amount Exonerated (C/)</b>
Banco Agrícola Comercial	8	29	22,019,726.00
Banco Capitalizador	14	64	15,081,932.38
Banco de Comercio	11	30	16,636,696.39
Banco de Crédito Popular	10	19	11,523,023.06
Banco Cuscatlan	16	48	29,442,677.94
Banco Hipotecario	37	101	59,807,914.50
Banco Salvadoreño	9	28	27,107,817.24
Banco Mercantil	9	30	6,274,635.20
Banco de Desarrollo y Inversión	5	20	3,528,895.86
Banco de Fomento Agropecuario	165	1,138	227,845,031.95
INCAFE	17	26	11,116,937.01
Federación de Cajas de Crédito	16	37	4,701,306.53
<b>Total</b>	<b>317</b>	<b>1,571</b>	<b>435,086,594.06</b>

Source: Fondo de Financiamiento para la Reactivación de las Actividades Productivas (FFRAP), June 1990.

125

**Table 3.20 Amount of Default on Production Credit and Those Who Use No Credit,  
319 ISTA Cooperatives, 1991-92**

	<b>Default</b>	<b>No Default</b>	<b>No Credit</b>	<b>Amount of Default (C/)</b>
Region I	26	47	14	11,683,665
Region II	20	43	20	13,461,319
Region III	15	35	19	1,594,318
Region IV	29	24	27	12,178,978
National	90	149	80	38,918,343

Source: OSPA-MAG, "Eighth Census of Agricultural Cooperatives," unpublished (1993).

126

**Table 3.21 Exonerated Production Credit and New Default, Surveyed Sample of Operating ISTA Cooperatives**

No. of Cooperative	Net Income per Member, 1992-93 (C/)	Exonerated Credit (C/)	Exonerated Credit per Member (C/)	No. of Loans Excused	Amount of New Loans in Default, 1992-93 (C/)	New Loans per Member (Mora C/)
1	2,145	1,101,075	14,681	1	1,395,891	18,611
2	53,149	1,135,307	16,695	6	2,000,000	29,411
3	0	0	0	0	847,000	21,718
4	23,219	4,986,018	45,743	3	4,711,000	43,220
5	6,146	429,291	13,848	5	676,610	21,826
6	12,253	4,500,532	6,429	4	0	0
7	0	0	0	0	0	0
8	4,264	623,508	15,587	2	0	0
9	1,619	700,097	6,307	5	0	0
10	910	235,284	9,411	3	500,000	20,000
11	2,703	0	0	0	1,328,340	17,950
12	23,395	111,007	1,585	1	0	0
13	25,394	4,399,869	34,373	7	0	0
14	0	0	0	0	0	0
15	2,138	656,313	1,682	8	9,500	243
16	0	0	0	0	0	0
17	7,172	1,089,261	37,560	3	0	0
18	1,989	1,135,691	34,414	4	500,000	15,151
Means and totals	12,235	1,172,402 21,103,253	11,231	3	664,907 11,968,341	5,918

Source: Fondo de Financiamiento para la Reactivación de las Actividades Productivas, "Reporte de saldos de créditos del programa de rehabilitación de las asociaciones cooperativas del S.A.R." (9 July 1992), Cuadro 03-04-220; and 1993 Land Tenure Survey in El Salvador, unpublished.

**Table 3.22 Exonerated Credit and New Default on Loans, Surveyed Sample of ISTA Cooperatives in the Abandoned Category**

<b>No. of Cooperative</b>	<b>Net Income (C/)</b>	<b>Credit Exonerated (C/)</b>	<b>Exoneration per Member (C/)</b>	<b>No. of Loans Excused</b>	<b>New Loans in Default (C/)</b>	<b>New Default per Member (C/)</b>
A	1,963	0	0	0	1,800	60
B	(7,661)	194,764	6,282	8	192,000	6,194
C	0	109,563	3,912	3	0	0
D	(2,121)	0	0	0	18,814	627
E	(539)	1,335,156	35,135	3	0	0
F	324	0	0	0	0	0
G	350	2,353,515	51,163	7	0	0
H	0	1,009,911	15,537	12	185,000	2,846
I	(584)	0	0	0	16,000	228
J	190	16,983,079	49,658	16	40,000	117
K	(348)	0	0	0	19,000	271
L	0	23,076	923	1	30,000	1,200
M	4,029	723,239	20,921	4	30,000	909
N	(3,742)	0	0	0	134,000	3,829
Average and total	(581)	1,623,736 22,732,303	25,657	4	47,615 666,614	752

Source: 1993 Land Tenure Survey in El Salvador, unpublished; and Fondo de Financiamiento para Reactivación de las Actividades Productivas, "Reporte de saldos de créditos del programa de rehabilitación de las asociaciones cooperativas del S.A.R." (9 July 1992), Cuadro 03-04-220.

128

**Table 3.23 Original Mortgage Payments (interest plus principal) and Prices for Land, per Member, Survey Sample of ISTA Cooperatives (March 1980 and May 1993 prices)**

Cooperative	Members	Manzanas	Mean Debt per Member (C/year)	Mean Value per Manzana (C/)	Hypothetical 1993		Amount Paid per Member to Date (C/)
					Member Debt (C/year)	Mean Value per Manzana (C/)	
1	75	405	927	1,361	6,333	9,298	0
2	68	519	NI				
3	39	423	1,218	873	8,321	5,964	0
4	109	800	3,494	7,138	23,871	48,768	0
5	31	192	4,797	6,792	32,773	46,403	0
6	700	2,983	3,059	6,808	20,899	46,512	593
7	190	980	3,288	8,967	22,464	61,263	68,392
8	40	340	2,976	2,790	20,332	19,061	0
9	111	625	328	1,514	2,241	10,344	0
10	25	137	1,838	2,657	12,557	18,153	0
11	74	417	793	2,433	5,418	16,622	5,620
12	70	1,241	2,209	1,149	15,692	7,850	0
13	128	1,559	3,352	2,530	22,901	17,285	0
14	80	301	NI				
15	39	764	901	366	6,156	2,501	0
16	38	500	1,371	825	9,367	5,636	0
17	29	314	5,900	4,998	40,309	34,146	0
18	33	411	1,287	1,190	8,793	8,130	0
Simple mean	104	687	2,982	3,724	14,864	25,442	

\* Adjustments for inflation were made using the CPI provided by Banco Central de Reservas, "Variación mensual del índice de precios al por mayor," and "Índice de precios al consumidor," IPC base, December 1992 (May 1993). ISTA information was also used in the construction of this table. The 1993 prices for land and mortgage payments should be read as "potential" values, assuming the price for land catches up with the CPI in the near future.

When the entire amount that ISTA paid for land in the early 1980s is divided by the number of manzanas purchased (including individual parcels plus collective land), the per manzana price is 4,846 colones, a figure somewhat higher than in our sample. Using CPI adjustments, the value of 1 mz. of land would be 33,108 colones (in 1993 prices). FINATA land prices were much lower, although land quality was also poorer on average. FINATA paid only 1,081 colones per mz. (7,386 colones in 1993 prices).

Table 3.24 makes the mortgage adjustment that ISTA will apply with the *nuevas opciones* (the figure that appeared in Table 3.12). The result is that the average mortgage payments required will be 2.5 times lower than before the reduction. ISTA's reasoning is that no campesino members should make land payment higher than the amount with which they could rent similar pieces of land near where they live. ISTA is revaluing all the land on the cooperatives in that spirit (ISTA revaluations shown here are still estimates, but they have been discussed with the cooperatives). The price of 1 mz. of land in this process has not been reduced nearly as much as the yearly average mortgage payment, however. Table 3.24 also shows that the vast majority of cooperative members will get some individually titled land out of the *nuevas opciones*, ranging from a parcel to a very tiny *solar*.

Whether these reduced mortgage payments will result in land debts actually being paid by cooperative members is, at present, an open question. ISTA is betting that lower payments plus the fact that an individual title to at least some land will be forthcoming will tempt members to remain "in good standing" and pay off their debts. There is, of course, no assurance that the performance on this score will be any different from that in the past.

Table 3.25 shows the entire mortgage debt for ISTA and FINATA in current colones. ISTA cooperatives have repaid only 3.3 percent of their total debt. We have no way to estimate how much of this is overdue payments, but we can compare it to the total debt of FINATA beneficiaries, who have paid off 20 percent of their mortgage debt in just about the same amount of time.

Another important matter is the amount spent by these institutions for administration of the agrarian reform. Considering office and equipment rental, wages of technical and support staff, and maintenance of central offices in San Salvador and bureaus in the various departmental capitals where ISTA has a presence (and not counting donor assistance for special projects), the organization spent some 335.3 million colones (current) or some 966.2 million colones of 1993. This amounts to an average of 25.8 million colones (current) per year or 74.3 million colones of 1993. Thus, since agrarian reform began in 1980, ISTA has spent an average of 26,328 colones (in 1993 prices) on each family settled in Phase I for administrative purposes. While it is impossible to make an exactly comparable estimate for FINATA, because it received A.I.D. funding for ten of the last thirteen years for purposes of administration, all funds from the government of El Salvador and A.I.D. stopped after 1991. Now FINATA uses land payments and other internally generated enterprises for its operating budget. It appears that FINATA spent about 150 million colones (1993) on the same administrative activities for which ISTA

**Table 3.24 Old and New Land Prices and Member Payments under *Nuevas Opciones*,  
Sample of ISTA Cooperatives**

Cooperative	Parcel Size <sup>a</sup> (mz)	Old Value per Manzana <sup>b</sup>	New Value per Manzana <sup>b</sup>	Old Mortgage Value per Member <sup>c</sup>	New Mortgage Value per Member <sup>c</sup>	Ratio Parcel Area to Total Area
1	0.09	1,361	1,324	927	266	1:55
2	0.5	NI	NI	NI	NI	1:11
3	5.0	873	757	1,218	312	1:2.1
4	0.4	7,138	2,818	3,494	779	1:18
5	2.2	6,792	6,885	4,797	1,613	1:2.8
6	0.15	6,808	8,338	3,059	949	1:20
7	0.09	8,967	9,339	3,288	1,610	1:51
8	3.84	2,790	1,290	2,976	533	1:1.4
9	4.95	1,514	604	328	131	1:1.1
10	3.8	2,657	2,012	1,838	462	1:1.1
11	0.02	2,433	2,498	793	530	1:307
12	0.14	1,149	944	2,209	530	1:104
13	0.26	2,530	2,585	3,352	1,185	1:47
14	4.0	NI	2,841	NI	937	1:2
15	0	366	2,008	901	901	0
16	12.5	825	1,385	1,371	1,269	1:1.8
17	3.62	4,998	4,039	5,900	1,923	1:3.4
18	7.31	1,190	1,032	3,728	1,689	1:1.7
Simple average	2.7	3,724	2,982	2,511	919	

<sup>a</sup> Parcels will be replotted under the new options plan, so the parcel size in this table does not match the present parcel size in Table 3.12.

<sup>b</sup> Per-manzana value of collective and individual land.

<sup>c</sup> Per-member value of collective and individual land.

Source: Table 3.23; 1993 Land Tenure Survey in El Salvador; and ISTA, "Situación de la deuda agraria de las asociaciones cooperativas en las que implementan nuevos modelos de tenencia de la tierra," unpublished (Departamento de Deuda Agraria e Indemnizaciones, 1993).

**Table 3.25 Mortgage Debt and Amount Paid (in 1980 colones)**

	<b>Total Mortgage Debt</b>	<b>Amount of Mortgage Debt Paid</b>	<b>%</b>	<b>Amount Remaining to be Paid</b>	<b>%</b>
ISTA	1,459,632,647	48,430,050	3.3	1,411,202,597	96.7
FINATA	89,746,981 <sup>a</sup>	17,567,019	19.6	72,179,962	80.4

<sup>a</sup> A total of C/5,758,683 was paid in cash

Source: ISTA, Gerencia Financiera, "Información al 30 de junio de 1993" (7 July 1993), unpublished table, consolidado de la deuda agraria de las cooperativas del sector reformado clasificadas por las tasas del 6% y 9.5%; adjustments for inflation according to Banco Central de Reservas, "Variación mensual del índice de precios al por mayor," "Índice de precios al consumidor," IPC base, December 1992 (San Salvador, May 1993). FINATA, *Diagnóstico y su Proyección* (San Salvador: Financiera Nacional de Tierras Agrícolas, March 1993), Cuadro 3-6, "Mora crediticia por rango de montos otorgados, hasta marzo de 1993", p. 15.

spent 966.2 million colones (1993), meaning that FINATA has spent about 3,530 colones in administration for every family settled. It is difficult to obtain exactly comparable data on these two organizations, but it is certain that administration costs for ISTA were considerably higher than those for FINATA on a per-beneficiary basis.<sup>15</sup>

### 3.12 Policy Suggestions

The amount of subsidy that the ISTA cooperatives have obtained over the past thirteen years is alarming, given the huge numbers of campesinos in the rural sector of El Salvador who are receiving no government transfer payments and have never received any. Therefore, it would seem prudent that USAID encourage reforms of the ISTA cooperatives along the lines

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<sup>15</sup> A few more general comments should be made about FINATA. As one would expect from the generally scattered nature of its land reform beneficiaries, obtaining production credit is a major problem for the FINATA beneficiaries, as it is for all campesinos in El Salvador. Transactions costs are high, and there is not enough production credit to go around.

Organizing into multipurpose cooperatives is more difficult for FINATA beneficiaries than it will be for ISTA campesinos because there is no critical mass of beneficiaries in most locations.

Another problem is that some 14,000 finateros are farming and making payments on land for which they hold a title bearing the name of some other campesino. Until 1991, FINATA beneficiaries were not able legally to sell their land, so land sales went on sub-rosa, and now there is enormous ownership confusion. FINATA must solve this situation as soon as possible, for it lends insecurity to the situation of some FINATA beneficiaries.

suggested here while continuing to monitor their progress and evolution for the lessons they afford, not only for El Salvador but also for other countries. Nicaragua would be an example of the latter. At the same time, it is the strong recommendation of this study that USAID not financially support ISTA or FINATA operations in the future, but that it turn its attention to the country's other needy campesinos, including the recipients of land under the Peace Accords.

Evidence cited in this study shows that subsidies obtained by ISTA agrarian reform beneficiaries in the past include:

- Low amount of interest on production credit loans until very recently.
- Low initial land prices (most landlords had a fairly low declared valuation for tax purposes in 1976-77, the basis on which they were remunerated), which were passed on to the campesinos.
- "Soft" loans from international agencies and even grants from foreign donors.
- Land payments, which remained unpaid and were eroded by inflation.
- Exoneration of production loans in 1990.
- Further reduction of mortgage payments by the *nuevas opciones* program.

With no further subvention, cooperative member beneficiaries will still enjoy subsidies in the future as their already low mortgage payments will probably be reduced each year by inflation. A 6-percent rate of interest will be charged, and El Salvador passed only one year in the last ten with an inflation rate lower than that. No provision is contemplated for adjusting these payments to fluctuations of either the consumer price index or the wholesale price index, although this would be an excellent addition to the present campesino pay-back schedule.

ISTA must execute strict measures to assure payment of defaulted credit and prevent further overdue remittances. The *nuevas opciones* process may offer the needed leverage for mortgage debt collections. Chances are that without further policy initiatives, however, the new program will not have this salutary effect. Therefore, each cooperative and ISTA itself need their own packages of sanctions. ISTA must construct a set of rules and regulations that it can impose when default occurs and that are known and understood far in advance of their application to cooperative members.

Ultimately, if all else fails, ISTA will simply need to take over the cooperative property and assign it to another group of campesinos who agree to be fiscally responsible. As interim steps, however, individual property may be removed from members and rented to other campesinos, whose rental payments then may be applied to unpaid balances of the parcel debt. Only when the cooperative is satisfied that the campesinos have become more responsible about overdue payments should land be restored.

In terms of property, a defaulting cooperative could be obliged to accept more members, or the government could intervene and appoint a technician to run the farm until it is solvent, pre-empting actions of the *junta directiva*. This would return the cooperative sector to the *co-gestor* system that was disliked so intensely by most cooperative members, a fact that by itself may encourage more fiscal responsibility. Or if cooperatives default on mortgage payments, part of the cooperative might be rented to outside campesinos whose rental payments would be applied to the cooperative's default. Because of the reduced land payments that will be required under new options, some cooperatives will find that they can make advance payments on their mortgages, an action that should merit some reduction in payment. Perhaps it can be established that when cooperatives pay in advance, they obtain a 10-percent discount, a policy now being discussed within ISTA. ISTA will still benefit because there is a good chance that yearly inflation will exceed that amount.

While it seems clear that most cooperatives, even those that have resisted to date, will apply the new options package since benefits are so transparent, should there be some stubborn laggards, there is no reason to deny the new rent-equivalent, land pay-back, debt-forgiveness package to them. A few cooperatives are likely to remain aloof from the reorganization on the general principles that they do not accept government initiatives—or they refuse to understand them—whatever they might be.

One of the reasons that campesinos are so protective of their cooperative is that the organization pays them wages out of production loans. The loaning bank should, in order to prevent these advances from being regarded as wages, reduce the "wage payment" part of production loans according to some schedule that is known to members well in advance of application. In cases of default, it would seem that the cooperative should institute policies that permit the recovery of this money from individuals if the cooperative cannot return its production credit at the end of the year. In that way, cooperative members will come to see a direct link between the cooperative's compliance with rules of sound fiscal management and their own incomes. A reduction in the wage-advance component of the production loan should not affect the amounts for fertilizers, seeds, and pesticides. That is, production and capacity to repay should not be jeopardized by this new credit policy.

Credit policies should be designed to allow cooperative members to engage in economic pursuits that are among the most profitable within the agricultural sector. Credit for perennial crops, for example, should be as available to cooperatives as to the private sector of farming.

Because cooperative members who do best are those with diversified farming programs, the linking of ISTA to CENTA (*Centro Nacional de Tecnología Agropecuaria y Forestal*) is necessary so that cooperatives can use new technology from the country's experiment station. This step would also help cooperatives facilitate planting of appropriate cash crops on the enormous amount of idle land that they and the country at large seem to have at war's end.

The CENTA-ISTA link should focus its research on crops that might be grown profitably on small farms or on collective property in El Salvador, given that making a decent living by

growing basic grains alone seems difficult if not impossible. Especially important is the fact that some of the most fertile property in the country is land on which cotton was grown previously, but no alternative crop that would utilize the soil in an economically optimal manner (assuming that grazing a few cattle on whatever grows naturally is not optimum use) seems to have been found. Also, although the local market could absorb some cotton in its fabric and clothing industries, no environmentally safe manner of growing the plant seems to be available. Research on an environmentally sustainable technology of cotton culture should, therefore, be a priority.

As some formerly collective portions of cooperatives become individualized under the new options program, ISTA should encourage the organization of multipurpose cooperatives to assist beneficiaries in the purchase of inputs and the marketing of outputs. Multipurpose cooperatives might also facilitate the dissemination of production techniques. Under the current system, cooperatives are disappearing into individual parcels and dropping off the cooperative rolls. If this process is to be halted, positive policy to found multipurpose cooperatives and make them operational must be developed immediately.

In the main, as part of the new options program, cooperatives must make their own choice on the type of land tenure they wish and not be hindered by the choices ISTA personnel might wish they would make, although ISTA personnel have the responsibility to explain the options clearly. Also, the choices in the new options package need to be more clearly thought through. Presently, the *participación real* option is disturbingly unclear at the levels of the central ISTA offices, the *juntas directivas* of the cooperatives, and the cooperative members, and Strasma's suggestions, quoted at length in this document, might form the basis for discussion on this subject within ISTA, the goal being institution of a solid and coherent policy on what really needs to constitute *participación real*. A policy needs to be established that will allow the cooperative members who exit the enterprise to leave with some of the capital they have helped to earn. As matters now stand, cooperatives are asking their members to accept a program involving redeemable shares without having ways to leverage enough funds to buy out those who want to leave, and campesinos who might want to join the cooperative also tend not to have the liquidity to do so.

Although sale of land reform property is now possible, there seem to be no regulations in place to prevent it from being sold to non-campesinos, even though such sale is contrary to law. ISTA is supposed to provide some vigilance over to whom land is sold and rented, but it has made no provisions to monitor purchases and rentals. Some cooperatives were renting their new parcels to non-campesinos for grazing purposes. If this is one way in which campesinos can be helped over temporary capital constraints, it may be advisable to allow this kind of tenancy. If this is one step toward non-campesino purchase of land, the problem is of another nature entirely.

ISTA has regularly been giving out titles that it does not register. This practice must be corrected as soon as possible.

ISTA should be weaned from its present clientele cooperatives and allowed merely to collect for past debts, to oversee CENTA's programs to increase production, and to foster the establishment of multipurpose cooperatives. As soon as possible, the Peace Accords land recipients should become ISTA's main client group. When Peace Accords campesinos are added to cooperatives, they should not be obliged to pay debts incurred by former members.

Economic sustainability is not fully understood on cooperatives. Therefore, a disturbingly large number of the farms seem to distribute as accrued wages an amount that is not justified by the need to pay debts and invest in future growth of production and labor productivity.

Some alternative to current financing of FINATA should be discovered; presently collected land payments are used to support the organization's operating budget, expending an amount that should be invested in new land purchases and a modest expansion of the reform.

The government should also help to organize agroprocessing units and other job-creating activities in the Salvadoran countryside and in small towns. The key to continued peace in the countryside will be the creation of more jobs with a higher productivity; this involves establishing farm and nonfarm efforts of all sorts to absorb the landless and near-landless in El Salvador. It also involves using the excess capacity implied in the idle land problem documented here to earn foreign exchange, provide reasonably priced food for cities, and create more employment on farms. A package of imaginative macropolicies that will make that possible needs to be fostered.

Little has been said about environmental issues because they are not at the forefront of the public agenda in El Salvador, emerging as it is from civil war. In fact, El Salvador ranks high on the list of countries with ecological damage that needs to be arrested with the help of programs that offer both conservation and increased production potential to campesinos. Especially where the ecosystem is under stress due to distributional and Malthusian pressures, the government must search for and carry out programs that demonstrate that agriculture among small-scale owners and remaining collective properties can be sustainable. One suggestion is to use some of the principles in Plan Sierra in the Dominican Republic, for example. It is suggested that some technical assistance from this project should be solicited for El Salvador.

Indeed, Plan Sierra aspires to a well-integrated and ecologically and economically sustainable program of forest management, community development, social service provision, sustainable field and garden plots, auxiliary income projects, and vocational and conservation projects aimed at all ages. A similar program is needed in El Salvador, and several of the ISTA cooperatives would be an ideal experimental ground for testing and then disseminating such a program of ecological technology related to small-scale agriculture and agroforestry. Presumably, for example, some of the land that is not currently producing could be used for tree stands that might be interplanted with annual crops for a time and then thinned for posts and poles and later allowed to mature into a stand of trees for lumber, all the while serving as a conservation cover for fragile and mountainous cooperative land.

Another part of Plan Sierra is also amenable for application in El Salvador. Some cooperative property and some strategically located FINATA properties should also attempt to utilize the technology developed there for sustainable small properties (*conucos sostenibles*). Food aid might be solicited from the United States to sustain small farmers who are willing to allow this experimental technology—including windbreaks, contour planting, deep-rooted crops and legumes, diversion ditches, and so forth—to be developed locally. This kind of agroforestry should include some or all of the following:

- Techniques to prevent erosion such as contour planting, mulching, contour barriers of living or dead biomass, minimum tillage practices, terracing, and hillside ditching.
- Good construction and maintenance of structural modifications such as correctly laid out contours, terrace benches dipping gently inward with ditches kept clean of sediments and without gullied ends.
- practices to maintain productivity and soil fertility such as crop rotations, intercropping, collection and use of mulches and manures, and composting of farm and household wastes.
- Efforts to increase household self-sufficiency and sustainability such as fuelwood plantings, living fences, and fish culture ponds.

#### **4. LAND PRICE, LAND MARKETS, AND GOVERNMENT INTERVENTION: POSTWAR ADJUSTMENT AND POLICY REORIENTATION**

This chapter explores the impact of land market forces in El Salvador on land tenure, on the Land Bank, and on the agricultural sector as a whole. The objective of the discussion is to comment critically on where and how government intervention in the land market may be warranted, if at all. Analysis of this theme is important at this moment because the end of the war is having a significant impact on the land market and because, with the Peace Accords land provisions and the creation in 1991 of the Banco de Tierras (hereafter Land Bank), the era of expropriative land reform in El Salvador is now over. Further initiatives to stimulate agricultural development through the dimension of land tenure will have to work with or against market forces.

The discussion will present evidence that land prices have increased dramatically since the end of the war, driven in part by the expansion of land sales for housing in rural El Salvador, but also because prices had declined in constant dollars during the war and are now readjusting to prewar levels. Given this price movement, the coverage of the Land Bank is likely to be decreased considerably from its proposed targets. Rental tenancy is likely to become the major form of market access to agricultural land for resource-poor agriculturalists and, because of this tendency toward rental, policies to mitigate the social costs of renting should be examined in detail and implemented.

The small size of El Salvador, coupled with its high population and the coming of peace has changed the rural landscape into one in which very few rural properties can now be viewed as destined for one exclusive use. Housing, industry, and transportation needs will compete with agriculture for the same properties in many parts of the country.

These country-specific factors, combined with land's traditional value as a preferred form of loan collateral and a hedge against inflation, create a set of circumstance in which land prices can be expected to rise faster than real income increases from agriculture in the foreseeable future. This rise will probably be sharpest during the period of economic adjustment that has followed the end of the war. If land prices increase faster than real incomes and faster than the profitability of agriculture, then land purchase will become an option for a decreasing number of rural Salvadorans. The social welfare implications of this expected outcome are unclear, and depend primarily on the employment opportunities that will occur outside of agriculture, the number of Salvadorans interested in agriculture, and the capacity of that group to profit from agricultural activity. In the meantime, these market conditions imply that land rental will continue to be perhaps the most important component of the land market for resource-poor farmers seeking access to land.

Although the Land Bank will continue to benefit an important group of small farmers, the trend of rising land prices and the unfavorable outlook for the profitability of agriculture in general indicate that the total number of buyers who can be serviced by the Bank will decrease at present levels of capitalization and down payments. This does not mean that the Land Bank is not an effective policy of government intervention in the land market. The changing economic context in which land is bought and sold, however, brings with it the need to explore a wider

spectrum of policy alternatives that take the institutional realities of and philosophical spirit of the Peace Accords as evaluative criteria for implementation.

As Binswanger et al. (1992) point out, in circumstances where alternative investment opportunities are limited and credit markets are underdeveloped, land provides returns that are neither from farming nor from rental: specifically, capital gains in future periods if land prices increase faster than average inflation, opportunities to evade income and value-added taxes from nonfarm activities by the landowner, and facilitation of borrowing from state banks in a tight money setting for working capital for nonagricultural activities. Binswanger's observations indicate that in the Salvadoran case it may be beneficial for the state to target its potential interventions around these gains (some of which would come directly at the state's expense), first by ensuring that such gains can be realized by a broad spectrum of the population, not just by those with high initial endowments, and second by using land taxation to promote a rational land use policy at a national level. Such policies could be efficiently implemented if a parallel course of development and refinement in the country's land information capacity.

This chapter explores the economic context surrounding the design of effective land market and land use policy, concluding that land price dynamics coupled with current levels of agriculture profitability will preclude the land sales market from becoming a broad outlet for resource-poor rural inhabitants, that remittances do play a significant role in the rural land sales market, and (referring to chapter 2 of this study) that on average, efficiency gains from smallness (i.e., significantly superior returns from smaller plot sizes due to advantages in care and labor supervision) are not found in El Salvador.

This chapter consists of an introduction and four sections. The first section describes the land price situation in El Salvador based on the findings of the 1993 Land Tenure Survey and the results of a small survey of current rural land sales. The second section examines the Land Bank as the key actor for government intervention in the land market, concluding that its scope will almost surely be reduced by land price increases. The third section comments on the persistence and importance of the rental market for land and presents some suggestions for mitigating the problems of collateral and investments in capital and soil conservation on rented farms. The final section summarizes the key finding of the chapter and its policy recommendations.

#### **4.1 The Land Market in El Salvador: Rebounding Prices and Proliferating House Lots**

The dynamism in the land sales market today comes from two principal factors: the natural adjustment of prices to prewar levels and the buying and selling of rural property for housing. This section will first examine the land price trend over the last fifteen years and will then examine its relationship to the housing market.

One way to estimate rural land prices is to use data from the 1993 Land Tenure Survey of El Salvador, which recorded the price paid for land by owners and the amount of time the

owner has been on the land.<sup>1</sup> After inflating purchases to 1993 colones using Central Bank data on yearly average change of the consumer price index, the land price per manzana as a function of time over the last fifteen years was estimated using ordinary least squares techniques and a subsample of 182 properties (Table 4.1) purchased between 1978 and 1992.<sup>2</sup> The land prices were not controlled for the presence of infrastructure and no attempt was made to make the equation sensitive to parcel size. The inflated land value reveals a mean of 16,661 1993 colones per manzana. The simple trend is negative over the period from before the beginning of the conflict until 1992, declining from an intercept term of 36,180 colones per manzana in 1978 (in 1993 colones) as seen in Table 4.2. This simple equation predicts an average land value per manzana of 5,061 colones in 1992. It should be recalled that 5,000 colones is the average price per manzana on which the Land Bank's 1991 Action Plan is based (this Action Plan is the basis for the creation and normal operations of the Land Bank. Some of the guidelines and procedures have been temporarily modified during the Land Bank's participation in the Peace Accords' land transfer program, but after the Accords are completed, operations will revert to those stipulated by the Action Plan).

**Table 4.1 Regression Estimation of Land Price on Time in 1993 Colones**

Dependent variable: Land price per manzana (1993 colones)			
R-square	.107		
Variable	B	T	Sig. T
TIME	-2,074	-4.634	.0000
CONSTANT	36,180	8.046	.0000

Where: TIME = years 1 to 15, 1978 = 1, 1992 = 15.

Source: 1993 Land Tenure Survey of El Salvador.

<sup>1</sup>There is some ambiguity associated with the length of occupation variable; that is, because of the way the question was posed it is possible that an owner who occupied land before buying it may have provided a date anterior to the date of the purchase. Anecdotal evidence suggests that this is rare in the case of private owners who were not affected by the FINATA reforms, and so, with some reservation, this measure will be used to indicate date of land purchase.

<sup>2</sup>The CPI was chosen because of its ready availability to the team working under time pressure. As was pointed out by an external reviewer of an earlier draft of this chapter, a more accurate deflator would be the GDP deflator or the wholesale price index. The CPI is influenced by the exchange rate, given the importance of imports in the consumption basket.

150

The explanation for this negative trend is the effect of the civil war in El Salvador. These results are not surprising given the problems faced by agriculture during the war and the movement out of the countryside by many landholders.

But if the war was the cause of the decreasing trend in land price, will peace generate a corresponding increase? The profitability of agriculture, as discussed in chapter 2, is generally low and thus inadequate to fuel a rapid rise in land price. On the other hand, land's value for nonagriculture purposes (e.g., for housing, for industry, as protection against inflation) can plausibly be assumed to have immediate effects. The very fact that land prices have not reflected inflation during the war years implies a quick rebound to reflect land's value relative to other goods. Demand for agricultural land for housing is another phenomenon that began during the 1980s and that seems certain to play a major role in the land market in years to come.

A sample of rural property transfer tax declarations<sup>3</sup> shows that 37.2 percent of land sales involve plots smaller than 0.1 manzana, 48.44 percent smaller than 0.2 manzanas, and 59.9 percent smaller than 0.5 manzanas. The percentage of sales of parcels smaller than 1 manzana is 67.7 percent, smaller than 2 manzanas 83.8 percent. The point of this cumulative distribution is that the 0-0.2 manzana category is the biggest category of land sales by frequency, and that these are sales of housing plots, not agricultural parcels. Although this group makes up only a fraction of the total land transferred in the sample, the frequency of transfers for housing is what is of most interest to the future of the land market. Although *lotificación* projects are still concentrated along major roads and near cities, field visits revealed that agricultural parcels were being broken up for housing around small towns and in areas that were up to 25 minutes by car from paved road. To the extent that previously agricultural land acquires the potential for use as land for housing (through proximity to other land put into housing, through extension of roads or communications, etc), the reservation price (i.e., the lowest price at which owners will sell) will tend toward a price that reflects the higher value use.

In other words, if the land market is conceived as being a segmented market with a high price segment for housing and a low price segment for agriculture, increasing demand in the housing segment will rupture the segmentation, and new equilibrium prices will reflect the intersection of the housing market demand curve and the agricultural land supply curve. Agricultural land will thus be offered at prices reflecting the willingness of buyers to pay for housing, and not necessarily on the income stream that can be generated from agriculture.

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<sup>3</sup>The sample was chosen from the copies of tax declarations reviewed and recorded by the Ministerio de Hacienda. Declarations received from municipal governments by the ministry from October 1992 to May 1993 were sampled. These declarations include transactions dated as early as December 1991 and as late as April 1993, with the median at December 1992. The declarations are stored in bundles according to the order in which they are received. These bundles are usually but not always grouped by department, and include both urban and rural transactions. The researcher sampled by selecting bundles at random, separating rural from urban declarations, and then systematically sampling from the rural declarations. The resulting sample includes 277 observations, including ones from every department except Morazán.

Clearly the demand for land for housing is increasing, but the extent of this demand increase is an empirical question, and a key one for policymakers interested in facilitating transfers of agricultural property. If the demand increase has been large enough to "de-segment" the market, then buyers for agricultural use may have difficulty finding affordable parcels. Cognizant of the increasing value of their land for other purposes, owners may prefer to rent until they sell on the housing market.

These assertions are not speculation. Interviews with large rural housing developers such as Argoz and Parcelaciones de Desarrollo reveal a number of interesting facts that support the above scenario. The total amount of previously agricultural land divided into *lotificación* projects is approximately 16,000 manzanas.<sup>4</sup> The largest of the rural housing developers, Argoz, S.A., which claims to control 53 percent of the business, has already created 100,000 lots—enough to house about 10 percent of the country's population. Doubling this figure to account for the rest of the *lotificadores*, it becomes evident that the housing lot phenomenon is sufficiently large to serve 20 percent of the population.

Furthermore, interviews with developers confirmed that the housing and agricultural land markets are indeed overlapping. Owners of agricultural land call the *lotificadores* when they want to sell, and one developer claimed that 60 percent of coffee growers in the country would like to sell their land for housing. In all interviews with *lotificadores*, demand was described as "infinite," or "unlimited."

Developers also confirmed that a rebound to prewar price levels or above is already under way, particularly in areas that were relatively unaffected by the war. Although these data are anecdotal, the fact that they come from sources who are involved in land sales on a daily basis makes them worth repeating. Land in Usulután was reported to be worth an average of 15,000 colones per manzana, 60,000 colones per manzana in Zapotitlán, and 35,000 colones per manzana for coffee land. Land near the airport was reported to have a current price of 70,000 colones per manzana and land in the corridor along the Pan-American Highway west of San Salvador was reported to worth 200,000 colones per manzana. Land in areas affected by the war, in Chalatenango or Morazán, for example, was reported to be worth 8,000 to 10,000 colones per manzana.

Using property tax data, a regression equation was used to estimate the price of land in El Salvador as a function of the land area and the presence of construction. All parcel sizes were included in the estimation because only by taking into account the price of land for housing as well as for agriculture can the policy-relevant land price be determined. Obviously an estimation of this type does not take into account a series of site-specific variables that influence land price, but the estimation nevertheless reveals a global picture of land price that fills a gap in available information.

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<sup>4</sup>This figure is based on information collected by the developers themselves.

The estimation included a term for the square root of parcel size, based on the hypothesis that land value per manzana is a decreasing function of size (because of the higher value placed on small parcels for housing), and a dummy variable for the presence of construction to control for the value of infrastructure. As shown in Table 4.2., the regression predicts land value per manzana at a price of 19,314 (mz<sup>2</sup>). Because the constant term is not significantly different from zero at the 0.05 level, it will not be included in the interpretation of the results (although the coefficient will be commented on speculatively later in the paper). The linear term is also not significantly different from zero. The construction dummy variable can be interpreted as raising the intercept term 40,680 colones above the land price. It should be emphasized that this specification intentionally conceptualizes the land market as one in which larger parcels will cost less per manzana than small ones. At a parcel size of 4 manzanas for example, the predicted price would be 19,341 x square root of (4)=38,682, or about 9,670 colones per manzana.

**Table 4.2 Land Price per Manzana as a Function of Parcel Size**

Dependent variable: Land price (colones)			
R-square	.103		
Variable	Coefficient	T	Sig. T
Square root of area	19,314	2.330	.0205
Area	-1,157	-.817	.4149
Dummy for construction	40,680	4.108	.0001
Constant	10,363	1.538	.1253

Source: Author's sample of land transfer tax declarations.

This regression shows that the current national average land price, when transactions of all sizes are included, is substantially higher than the prices being paid by the Land Bank for agricultural properties under the Peace Accords, the most readily available datum on land price. The average price of land for properties legalized through Land Bank transactions as of June 30, 1993, is 6,374 colones per manzana (A.I.D. update report). It must be taken into account, however, that these properties are generally located in conflictive zones and have been occupied for up to thirteen years by unofficial *tenedores* (occupants who settled on the plots without documentation during the war). The price paid for these properties would therefore be expected to reflect the lower end of the land sales market.

152

The importance of the simple regression figures, is not, however, merely to describe the current price of agricultural land, but rather, by making the land price measure sensitive to the market for housing plots in rural areas, to predict where the land sales market is moving.

Inferring from the two sets of data, it seems evident that the rebound in land prices has, in fact, accompanied the peace process. Table 4.3 shows the simple averages of price per manzana divided into three-year cohorts. What is evident from this view of the data, which is masked by the regression, is that the fall in land prices stops during the last three-year period (1990-1992). Coupling this observation with the 19,000 colones per manzana figure from the 1993 sample indicates that a rebound in land price has occurred since the peace process began and that the rate of increase is steep.

**Table 4.3 Average Land Sales Prices for Three-year Periods Since 1978 (1993 colones)**

Three-year period	Average land price per manzana (constant 1993 colones)
1978-1980	37,201 (n=21)
1981-1983	27,742 (n=37)
1984-1986	17,378 (n=26)
1987-1989	10,614 (n=47)
1990-1992	10,321 (n=51)
1993	19,341 (for 1 mz, without construction, predicted by regression)

Source: 1993 Land Tenure Survey of El Salvador.

These conclusions are also supported by anecdotal evidence gathered on field trips around the country. When asked the question "How much would it cost to buy a manzana of good agricultural land in this area?" informants responded with a low of 3,000 colones/manzana (specifically in a corn-growing region near Guaymango, Ahuachapan) and highs of 25,000 (in former cotton areas near San Marco Lempa, Usulután for unirrigated farmland without permanent crops).

Looking at these data globally, it seems evident that the 6,000 colones per manzana price is probably now the bottom end of the market for land that is still primarily agricultural and of limited profitability, and that the average price of 19,000 colones per manzana (for plot sizes of 1 manzana) is not out of line with prewar price levels when adjusted for inflation. Average land prices near 20,000 colones per manzana in rural areas will probably be the norm in the next

154

two years as (1) the postwar adjustment from a war-depressed land sales market occurs and (2) the value of land for housing affects an ever larger fraction of rural terrain. Given the evidence from the time trend, it is likely that average land price will quickly move to around 36,000 1993 colones. That the 36,000 figure does reflect the price of prewar land in constant colones is supported by the price data presented in chapter 3 on the prices of lands expropriated by ISTA in Phase I of the agrarian reform, which average 33,000 1993 colones per manzana.

If the statistically insignificant intercept coefficient from the 1993 land price sample is accepted as a true parameter, it is interesting to note that for small parcel sizes the 1992 price and the 1978 price (as predicted by the regression intercept term) are very close.

This evidence indicates that (1) land prices are in a state of swift upward adjustment after being depressed by the war, (2) prices of land for housing in rural areas contribute another strong upward pressure on land prices, and (3) the adjustment process has probably not concluded and the absorption of agricultural land for housing is probably just beginning.

#### 4.2 The Land Bank in a Context of Rising Land Costs

The 1991 Land Bank Action Plan bases its assumptions about the amount of land and the number of beneficiaries it can affect on another set of assumptions about land profitability and land costs. The data from this report indicate that the land profitability assumptions are reasonable, but that the land price assumptions are probably too low. If this is the case, then the number of farmers expected to benefit from the program over the coming five years is almost surely smaller than what has been foreseen. Furthermore the structural economic forces seem to lead toward a continuing shrinkage of the Land Bank's coverage. Although the Land Bank will continue to provide an important service, its clientele will probably become increasingly limited. As land prices rise, the flow of payments from outstanding mortgages will be unable to support the same number of new, higher-priced loans unless the size of the down payment is substantially increased.

The land price assumption of the current Land Bank Action Plan—5,000 1991 colones per manzana—leads to a projected 25,392 beneficiaries by the year 2000. Changing this assumption to a conservative 8,000 1993 colones/manzana with 10-percent inflation and a 20-percent annual rise in land values reduces this number to slightly more than 10,000 beneficiaries.<sup>5</sup> As the above discussion of land price indicates, the latter set of assumptions seems more likely for the future.

The Land Bank's internal rule to lend no more than 20,000 colones per borrower may need to be revised because the price of land will probably soon make the purchase of 3 manzanas with 20,000 colones unusual. This is not unexpected. John Strasma (1988) in his

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<sup>5</sup>The assumptions and cash flow analysis can be reviewed from the Land Bank Action Plan and from John Strasma (1988) "FINATA's Land Bank Program in El Salvador: A Financial Analysis."

analysis of a land bank proposal predicts that "if peace were to break out, land prices would skyrocket." The Land Bank was conceived and brought into being in war-depressed market conditions and now is being confronted with the postwar price adjustment.

Given the limited Land Bank coverage caused by rising land costs, it is important to ask if remittances from abroad could close the "down payment gap," that is, the lack of endowments to make a 5-percent down payment in order to qualify for Land Bank financing. It is certainly conventional wisdom among the *lotificadores* (rural housing plot developers) that much of the money fueling the explosion of housing plot sales comes from remittances. The data on this point are contradictory, but the conclusion of this analyst is that remittances play a significant role in the housing market but not in the market for agricultural land, therefore further underscoring the market dynamics outlined above.

The MIPLAN data does not indicate that remittances will be a major source for funding land purchases. Using the same MIPLAN sample of 13,291 rural working-age inhabitants used in chapters 1 and 2, 1,488 (11.2%) receive some form of regular remittance. Of these only 11 (0.7%) asserted that they use the money for land purchase. With respect to housing 5.7 percent claimed to be using remittances to purchase housing. Consumption was the primary use of the remittances, reported by 93.2 percent of the respondents. Even if remittances continue to enter the country at current rates, they are clearly not entering the land purchase market in rural areas with great frequency, although they do seem to play a role in the rural housing market, and presumably will contribute to upward pressure on land price through the rural housing market.

These data are flatly contradicted by the *lotificadores*, whose client profiles reveal that about 60 percent of the overall budget of housing plot buyers comes from remittances. This evidence indicates that many respondents in the MIPLAN survey probably included housing payments into the consumption category. Nevertheless, these two data sources together suggest that the flow of remittances probably directed much more toward the purchase of land for housing than toward the purchase of land for agriculture.

A different line of debate about the role of the Land Bank revolves around the efficiency; that is, there are straightforward efficiency gains from promoting small farm sizes because of the technical "economies of smallness" in micromanagement of certain crops and more effective labor supervision (primarily through family labor). In the case of Salvadoran corn-bean-sorghum growers or coffee growers, the expected targets of the Land Bank program (Land Bank Action Plan, 1991), only a very weak case can be made for this position. As pointed out in chapter 2, average profits per manzana decline slightly with increased area cultivated, but the rate of decline is so small that it is trivial across the functional distribution of farm sizes in El Salvador.

Whereas small farmers may have true competitiveness advantages in situations such as those in Guatemalan winter vegetable production, they do not appear to have a clear-cut competitiveness advantage in typical farming systems in El Salvador. The economic benefits from the Land Bank's activities to the extent that the bank overcomes a market imperfection

caused by capital constraints and the high transaction costs of subdividing land. Additional gains from increased technical efficiency, however, do appear to be available.

There are some practical measures that could make the Land Bank more agile and effective, even if its overall impact appears to be sharply limited by larger market forces. The first of these is to establish a deadline for the termination of the priority treatment being received by ex-combatants under the Peace Accords. As of this writing the transfer program is behind schedule. Protracted negotiations, administrative wrangling, price disputes, and accusations of lack of good faith all contribute to a process that forces the Bank's originally intended clientele—private farmers who were not participants in the war—to wait for the resolution of the land transfer program. A firm deadline agreed to by all parties would give everyone involved the motivation to carry out negotiations efficiently and in good faith, and stop penalizing the private individuals who are waiting to negotiate properties through the Land Bank.

Another, easily remedied flaw in the Bank's operation is that, under the 1991 Action Plan, no guidelines are included for ensuring the ecological soundness of the land transfers. Some land should simply not be used for agriculture on ecological grounds, and the Bank could easily assure that it does not contribute to soil degradation by refusing to finance transfers of ecologically fragile land. On-going efforts by the government to generate a comprehensive land information system with agro-ecological data could provide the information for these determinations.

A third practical consideration would be to revise the price guidelines under which the Bank operates. To do so would be admitting that, at current levels of financing, the Bank will have to reduce its ultimate number of beneficiaries. However, by maintaining the current ceiling of 6,500 colones per manzana, the quality of land available and the quantity offered will probably dwindle considerably after the Peace Accords transfers are completed and normal operations are resumed.

A fourth practical measure would be to permit private developers to operate in parallel with the Land Bank to have access to sources of external funding. Prominent developers interviewed asserted a strong desire to provide this service and felt that they were in unfair competition with the government in this respect.

A fifth suggestion is that the Land Bank establish at least a minimal presence in the countryside. Given that one of the Bank's goals is to reduce transaction costs, the fact that interested parties must travel to San Salvador to transact even the most basic business seems contradictory. It would be very reasonable for at least one functionary and a secretary to be stationed in Santa Ana and in San Miguel to handle routine inquiries.

In summary, the Land Bank has always been considered only one limited component of El Salvador's response to the issue of the rural resource-poor. This analysis indicates that rising land prices will limit the Bank's role even more unless additional capital is found to allow the Bank to maintain its scope of land purchases at higher prices. This is not to say that the Bank

will not continue to provide an economically and socially important service, and the Bank's important role in the execution of the Peace Accords is already a fact. It does, however, indicate that structural changes in the land sales market and the nature of small farm agriculture imply that further interventions in the land sales market to stimulate agriculture would cost a great deal and achieve limited results. This analysis wholeheartedly endorses the Land Bank's program, but simply points out that the social welfare benefit obtained from investing more money in the Bank may be less than the social welfare benefit gained from investing in other segments of agriculture, given the findings presented here about land prices and those presented elsewhere in the report about the size and needs of other populations, notably land renters.

### 4.3 The Land Rental Market: Here To Stay

As Mitchell Seligson's pointed out in chapter 1, land rental is a deeply rooted form of tenure in El Salvador. If analysis of land price movements and demand for land for housing are correct, then rental arrangements seem certain to continue and perhaps even to expand, unless agricultural profitability drops significantly compared with wage opportunities. As the reservation price and collateral value of owned land increases, its supply for sale at *any given price* decreases. If demand for land for agriculture remains constant, then rental tenancy should increase. Rental rates will not necessarily rise commensurately with land price, however, because the rental rate of agriculture will continue to represent the income stream available from land from agricultural activities, and not from housing sales. The rental rate will also be constrained from the demand side by the fact that if returns from land minus rental payments fall below the opportunity wage, renters will leave the market.

The 1993 Land Tenure Survey of El Salvador found an average yearly rental rate of 362 colones per manzana, which was confirmed by field visits to renters. As pointed out in chapter 2, however, the important questions about rental tenancy at this point have less to do with rental rates than with questions of long-term investment and soil conservation. If market forces reinforce and even expand rental tenancy, then these issues have an even larger significance. Furthermore, because policymakers have tended to pay less attention to renters as a lasting group, measures to target them specifically are not in place.

The two basic problems of rental tenancy concern the lack of collateral for long-term loans (short-term credit can often be obtained by pledging the crop as collateral) and the lack of incentives for long-term investments, whether in infrastructure, perennial crops, or soil conservation. Measures to deal with these problems include:

1. Education of property owners and renters about new technologies in production and soil conservation. Owners can charge higher rents for higher value activities on their land and are more likely to be interested in taking the risks of longer term leases if the renter is well trained in the production practices to be used. Owners stand to lose the rental income stream if soil quality deteriorates too badly and, therefore, they would be naturally interested in learning about soil conservation techniques. Renters as well, to the extent that they may farm the same plot for successive years, have an incentive to

voluntarily undertake soil conservation (although not necessarily at optimum levels). If both parties are well-informed about soil conservation, the probability that parties will undertake conservation voluntarily or build it into rental contracts is heightened. The Ministry of Agriculture's new extension program with World Bank funding is one ongoing, large-scale project that focuses on small farmers and that could serve as a basis for intensive targeting of renters. Other on-going initiatives by farmers organizations and groups of ex-combatants to teach sustainable agriculture and nontraditional techniques in regional demonstration schools could also provide a platform for broader educational efforts.

2. **Land tax policies.** Taxation according to use potential would give owners who are renting land for uses beneath its capacity incentives to make investments in higher value crops and conservation mechanisms, even if they still intend to rent out the land.
3. **Promotion of long-term leases.** The longer term lease would give the renter more incentive to manage the soil resource, although unless the leases were of extremely long duration they would be of limited usefulness for promoting investment. Incentive to the owners to lease for longer periods could be created through tax incentives, particularly if the proposed municipal property tax becomes a reality.
4. **The improvement of the justice system in creating an atmosphere of enforceability of contracts.** If emphasis is to be placed on creating specialized rental contracts or long-term leases, then there must be a credible enforcement system in the background of the contracting environment.
5. **Limited partnerships.** This measure would actually be an alternative to renting, but could be promoted when the landowner does not want to personally work land or sell it, but is willing to accept some risk. The promotion of partnerships between renters and owners may be appropriate for crops that require a period of time to enter into production and/or crops that require extensive skill in production and handling. This measure would thus go hand-in-hand with the introduction of techniques for producing specialty crops.

#### **4.4 Conclusions and Recommendations**

This chapter addresses the question of how the land market will affect land tenure in El Salvador and the effect of those changes on the agricultural sector and on government intervention in the land market, specifically through the Land Bank. It shows that land prices have risen sharply in the last two years, almost certainly in response to the arrival of peace in the country and the parallel expansion of housing plots in rural areas, but that in constant colones the price rise represents a movement toward prewar levels. Current prices still have not reached prewar levels and, coupled with the effect of land sales for housing on the market nationwide, are expected to continue to increase sharply, probably to the 35,000 colones per manzana level (1993 colones) within approximately five years. This trend will reduce the

projected number of beneficiaries by at least two-thirds under current capital levels. Continuing capital support of the Land Bank would require increasing amounts of money to benefit a decreasing number of people. Arguments about the possible effects of remittances appear to have some merit, but appeals to the efficiency gains from a smallholder sector are not extremely relevant in the Salvadoran case.

Meanwhile the rental market will continue to be the most common means of market access to land for rural inhabitants and will probably expand given the incentives that owners have to hold owned land during a time of rising prices.

The changing structure of demand for land implies that land policy must change as well. Demand-driven intervention in the land sales market along the lines of the Land Bank is only a partial solution. Land taxation, agro-ecological mapping, and land-use guidelines are alternative policies for which much preparatory work has already been accomplished, including a major study of municipal land taxation commissioned by A.I.D. Implementation of a heterodox and judicious package of these policies may be the best bet for using changing market and institutional circumstances to best advantage. These changing conditions also necessitate a reappraisal of the land rental market.

The recognition of the persistence and importance of rental in the land market implies that effort be put into policies that mitigate the suboptimal effects of this form of tenancy. A series of possible policy initiatives that ease problems of collateral and create a longer time horizon to promote capital investment and soil conservation merit immediate attention, as do new paradigms of rural education and extension, property tax measures, justice system improvements, and promotion of limited partnerships. Significant resources have been lent by the World Bank to fund a new agricultural extension model through the Ministry of Agriculture, creating an important basis for extension policies that specifically target small farmers and renters. Parallel efforts by farmer associations and groups of ex-combatants to establish regional training centers in sustainable agricultural techniques also represent concrete local measures that could be supported and amplified by future policy implementation.

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162

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7/86